

CAREER MATURITY AND LOCUS OF CONTROL
ORIENTATION IN JAMAICAN HIGH SCHOOL STUDENTS

BY

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The purpose of this study was to investigate the associations among career maturity, locus of control orientation, gender, form level (i.e., grade in school), and socioeconomic status in Jamaican high school students. A sample of 324 male and 339 female students was drawn from first, third, and fifth form English language classes in five high schools.

The instruments administered were the Attitude Scale of Crites' Career Maturity Inventory (CMI), the Nowicki-Strickland Locus of Control Scale for Children (NS-IE), and a demographic questionnaire.

Nine null hypotheses were tested in the study. The analysis of variance was used to determine if Jamaican high school students differed by form level, gender, and socioeconomic status (SES) in career maturity and locus of control orientation. In addition, t tests were used to compare the career maturity and locus of control orientation of Jamaican and American students of equivalent ages.

The hypothesis of no significant difference due to form level was rejected at the .01 level for both the CMI and the NS-IE for Jamaican students. Differences in career maturity which existed in the two younger Jamaican/American comparison groups had diminished in the oldest group. Only the third form/eighth grade comparison was significant at the .01 level.

Jamaican males scored more in the internal direction than American males; for females, the situation was the reverse. These differences were, however, not significant, except for the third form/eighth grade males who were an exception to this trend.

Cultural factors were virtually unrelated to the development of career maturity and locus of control.

In Jamaican students, more mature career attitudes were associated with an internal locus of control and higher SES; an internal locus of control was associated with male gender and higher SES. The interaction of these factors had no significant effects on career maturity or locus of control.

Recommendations were made for increased attention to the needs of students from the lowest socioeconomic level, for further research on the development of career maturity, and for the creation of appropriate programs and materials for career guidance.

CHAPTER I INTRODUCTION

In 1980, Douglas, an 11-year-old Jamaican primary school student, was awarded a free place in the annual Common Entrance Examination, a screening examination presided over by Jamaica's Ministry of Education to select the most intellectually able for a free high school education (Phillips, 1985). For the next 5 years, Douglas pursued an academic curriculum designed to prepare him for entry into the sixth form and, subsequently, into the University of the West Indies. He intended to major in political science and then enter law school. Unfortunately, he passed in only three of the seven subjects for which he was entered in the General Certificate of Education, Ordinary Level (O-Level) Examinations.

Lisa, another Jamaican student, had been successful in the O-Level Examinations and was accepted for the sixth form. She spent 2 additional years of intensive preparation in three academic disciplines to gain admission to a university. She failed two of the three subjects for which she was entered in the General Certificate of Education, Advanced Level (A-Level) Examinations.

Both Douglas and Lisa are typical examples of students who become stuck at critical points in Jamaica's academic high schools. Failure

to realize educational and career goals has become commonplace and is contributing to a pessimistic outlook among Jamaican high school students (Strudwick, 1985).

The Common Entrance Examination is taken at approximately age 11 by primary school children in Jamaica. It is composed of three tests: English, mathematics, and mental ability. Places in the academic high schools are awarded to the students who perform best in this examination (Hamilton, 1979).

Certification at the end of high school in Jamaica is acquired through the General Certificate of Education (GCE) Examinations of the University of Cambridge, England, and, more recently, through the Caribbean Examination Council (Phillips, 1985). Students are entered for an average of six subjects in the O-Level Examinations, with entries ranging from a minimum of four to a maximum of nine subjects. At the Advanced Level, students usually specialize in two, three, or four subjects in the arts or sciences (Leo-Rhynie, 1978).

The first 5 years of high school in Jamaica are known as forms one through five. A student in the fifth form is in the final year of preparation for the GCE O-Level Examinations. Students who perform well in these examinations have the opportunity to continue pre-university studies in the sixth form. At the end of a 2-year period, the A-Level Examinations are taken in two, three, or four subjects (Fisher, 1979).

Success in the Jamaican education system is based on passing the Common Entrance examination and the G.C.E. (O- and A-Level) Examinations (Phillips, 1985). Despite the rigorous criteria for entry into Jamaica's academic high schools, success rates in terms of "passes" in these examinations in recent years have been consistently low (Kuper, 1976; Leo-Rhynie, 1978).

In 1985, 2,501 of the 4,119 (61%) Jamaican high school students who sat for the O-Level English language examination failed and 46% of the 714 entered for A-Level mathematics failed (Statistical Yearbook of Jamaica, 1986). In 1980, only 30% of the 1451 students who sat for the A-Level Examinations obtained two or more passes. This alarming failure rate in these subjects in the 1980s is not at all unusual for Jamaican high school students. Leo-Rhynie (1978) concluded that "wastage at the sixth form level has become a problem of national concern" (p. 153).

The criticism that education has failed to respond effectively to the changing needs of the population has echoed for many years in Jamaica and in other post-colonial societies (Adams & Bjork, 1969; Bacchus, 1978). The educational systems in these societies continue to bear the stamp of the former European metropolitan power (Husen & Postlethwaite, 1985). In Jamaica, the British colonial concepts of occupational prestige have lingered to the detriment of other types of occupations crucial to economic growth and development (Cross,

1979). As a result of this heritage, the secondary school system in Jamaica has concentrated on preparing students for the succeeding rung of the academic ladder and therefore has, indirectly, escalated aspirations and expectations for professional occupations (Husen & Postlethwaite, 1985).

In order to create a more egalitarian educational system in Jamaica, succeeding governments over the past 30 years have attempted to provide secondary education for a wider cross-section of Jamaican society (Phillips, 1985). They have initiated policies, including the institution of the Common Entrance Examination, which have resulted in a constant increase in enrollment in Jamaica's secondary schools (Jamaica Ministry of Education, 1971). Free education is now available at all stages of a student's educational career in Jamaica. However, progression from one stage to another is contingent on a highly competitive selection process (Leo-Rhynie, 1982). The result of the democratization of education has been an expansion in educational opportunities for Jamaica's students, with the ability to pass supplanting the ability to pay (Figueroa, 1971).

The academic high schools in which an ever-increasing number of Jamaican students have been placed were originally designed by expatriates during the colonial period (Gordon, 1969). The curricula of these educational institutions were patterned after the English grammar schools. Their function was to prepare privileged students

for entry into the civil service, or into the medical or legal professions in British universities (Gordon, 1969; Richards, 1974). During the colonial period in Jamaica, the limited need for skilled technicians was filled by British expatriates (Richards, 1974). However, with the achievement of Jamaica's political independence in 1962, the demand has increased for a more varied workforce to contribute to the nation's development and to the efforts aimed at transforming the society from an agrarian to an industrialized one (Mandle, 1982).

In the past, there was an almost automatic system of progression from a Jamaican high school to a white-collar job or a university education (Jackson, 1974). This situation has changed with the growth in enrollment in the secondary schools. In the opinion of many educators, the Jamaican high schools have become susceptible to the social and educational problems of the wider society: problems of underachievement, lack of motivation, and, for some students, lack of interest in a seemingly irrelevant curriculum (Leo-Rhynie, 1978).

The disenchantment with the educational system in Jamaica has prompted successive commissions of inquiry to point to its limitations in developing the skilled labor force essential to economic and technological development in an emerging nation (Whyte, 1983). As the discrepancy between the needs of Jamaica's labor force and the output from the high schools has widened, criticisms have continued to be leveled at formal education for its inability to

contribute substantially to national development (Tedesco, 1983) while consuming over 5% of the gross national product (Cross, 1979; Phillips, 1985). The expectation has been expressed that there would be some degree of equilibrium between the financial investment in education and returns in the form of appropriately trained graduates to take their place in the existing economic structure (Husen & Postlethwaite, 1985). Unfortunately, according to a report by Tedesco (1983) on trends in the development of education in Latin America and the Caribbean, the dividends expected from education have not materialized. Rather, a gloomy picture has been described by Wolfe (cited in Tedesco, 1983), "an increasingly widespread sense of lost opportunities, of the squandering of irreplaceable human and natural resources, and of the urgent need for new concepts and strategies" (p. 37).

Researchers from Jamaica's sole university indicated an intensification of the clamor for relevance. One of the voices from the university was that of James-Reid (1982). She called on policy-makers to reexamine the role of the Jamaican high school in the community. Some action has already been taken to meet these new challenges with the establishment of the Caribbean Examination Council to provide a system of education and certification better equipped to meet the demands of the local job market (James-Reid, 1982). In order to fulfill these emerging roles, Leo-Rhynie (1982) recommended

guidance for Jamaican students in the selection of courses and in planning for the available career opportunities. Leo-Rhynie (1982) also suggested that career guidance would be an important first step in helping students to develop skills in the critical areas of task motivation and realistic problem-solving. During the past decade, guidance counselors have been appointed in Jamaica's secondary schools, but there is no information available at this time on the scope or the effectiveness of this innovation. Rather, Leo-Rhynie (1982) criticized the manner in which this program was implemented, i.e., without the benefit of a research base.

Over 30 years ago, Super (1954) commented on a dilemma which remains relevant for educational administrators and career counselors in developing countries such as Jamaica, i.e., should the privileged elite group in the high schools be channeled into areas of study that are vital to the survival and progress of an emerging nation, or should guidance foster individual development? According to Super (1983), in countries with democratic ideals, the expansion and diversity of educational and occupational opportunities have usually resulted in the introduction of guidance programs to enable the youth to take advantage of the new options available. Obviously, Jamaica's educators have not taken either of these courses of action, yet the need for accountability in education has been clearly emphasized (Tedesco, 1983; Whyte, 1983).

Bacchus (1975, 1978) called for action to make education more functional and cost-effective to the Caribbean area. The combination of a high incidence of academic failure, school leavers without certification or marketable skills (Kuper, 1976), and unfilled vacancies in the labor market (Husen & Postlethwaite, 1985) all seem to indicate a need for Jamaican students to be provided with educational and vocational information for more realistic career decision-making. When implemented in the early high school years, career guidance has the potential for offering an alternative to the tragic waste of human and financial resources (Tedesco, 1983).

Once, the dream for Jamaican students was that the removal of inequalities in the educational system would pave the way to upward mobility (Whyte, 1983). However, increased access to secondary education has not proved to be the expected catalyst for change. Aspirations and expectations for white-collar and professional occupations are proving to be a mirage for many of Jamaica's high school students and their expectant families (Cross, 1979). In spite of the resulting disillusionment, students continue to hold negative attitudes toward nonacademic occupations (McKenzie, 1986). Consequently, they remain trapped in a dysfunctional educational system whose primary function is preparation for higher education (Richards, 1974). This tradition is perpetuated with little regard for the changes in Jamaica's economic structure and the existing 25% unemployment rate (Statistical Yearbook of Jamaica, 1986).

The backdrop for the social and educational upheavals described has been the changing, at times chaotic, economic, social, and political climate in Jamaica (Mandle, 1982). The political and economic insecurity of the 1970s, fueled by changes in the political philosophy of Jamaica's ruling party and the impact of tremendous increases in oil prices, contributed to a life-threatening struggle for Jamaica's survival--at least at a standard comparable to existing expectations. These conditions resulted in a "brain drain," i.e., the migration of highly skilled Jamaicans, which has made it even more difficult for economic and educational objectives to be attained (Husen & Postlethwaite, 1985).

The 1980s began with a restoration of confidence in Jamaica's future and a national program for reconstruction (Jamaica Labour Party, 1980). New industries and new technologies have attracted and challenged the attention, the imagination, and the resources of Jamaica's population. There are perhaps parallels between the current situation in Jamaica and that which led to the founding of the Vocational Bureau of Boston in 1908 (Hoppock, 1976). In the United States, the impetus for the guidance movement came from the recognition of the need for vocational guidance in a changing society in an era when parents became less knowledgeable as information-givers (Hoyt, Evans, Mackin, & Magnum, 1974). In this period of transition in Jamaica's educational and social history, new approaches are called for to give substance to the pathetic and unrealistic hopes pinned on the high schools by the parents of the deprived (Kuper, 1976).

The problem addressed in this study was the lack of knowledge of the career development process of students in Jamaican high schools. More specifically, the focus was on the maturation of career attitudes in this population. Locus of control orientation, educational and maturational growth, gender, and socioeconomic status are among the factors known to affect career maturity (Crites, 1973; Gardner, 1981; Nowicki & Strickland, 1973). The relevance of these factors and their associations in the Jamaican context were investigated in this study.

Theoretical Framework

The concept of career development is a fairly recent one, even in the United States. Before the 1950s, career decision-making was seen as a matter of chance, or a "time-bound, largely static event" (Crites, 1978b, p. 3) occurring sometime around high school graduation.

Ginzberg, Ginsburg, Axelrad, and Herma (1951) were among the first theorists to conceptualize the choice of an occupation as a process, extending from approximately age 10 through age 21, and progressing through the definable periods of (a) fantasy (age 6 through 11), (b) tentative (age 12 through 17), and (c) realistic (age 18 and over). Super (1955, 1957) elaborated on this theory and introduced the concept "career maturity" to denote the place reached on a continuum of vocational development ranging from exploration to decline.

Crites (1961, 1965) operationalized the concept of career maturity and developed a measure for identifying the individual's standing in relation to chronological age or the behavior of others at the same developmental stage. Crites found the maturation of career attitudes to be systematic, with the most significant spurts occurring between the 6th and 7th grades (i.e., between ages 12 and 13) and between the 9th and 10th grades (i.e., between ages 15 and 16).
Career

maturity is expected to level off at about the 12th grade, a period that coincides with the realistic stage (Ginzberg et al., 1951).

In addition to developmental theories of career decision-making, Erikson's (1968) psychosocial theory of human development offers a more complete understanding of the dynamics involved because it takes into account a wide range of social forces and their interaction on the adolescent's search for identity. This search for a personal and occupational identity occurs during a period of considerable fluctuation of vocational interests and goals which gradually become better defined and more realistic (Super, 1957).

The charge has been made by Richards (1974) that the Jamaican high school student settles on an occupation somewhat prematurely, without the period of moratorium advocated by Erikson (1968). Richardson (1982), drawing heavily on the work of Erikson, found some support for this position in a study of identity formation in Jamaican students. Richardson indicated that persons from the lower

socioeconomic level were motivated to make definite career choices at an earlier age. Richardson theorized from the results of this study that only persons from the upper social strata of Jamaican society were able to afford the luxury of the occupational moratorium advocated by Erikson (1968). These findings seem to add confirmation to the observation of Richards (1974) and Jackson (1974) that career decisions were being made inappropriately, early in adolescence, before the period of moratorium that has been observed to encourage greater maturity in decision-making. The years of secondary schooling are expected to offer opportunities for reality testing through school courses, extracurricular activities, and temporary jobs (Super, 1953). However, this may not be the case in Jamaican society. Richardson (1982) has raised the concern that there may be active repression by school personnel in Jamaica rather than encouragement of students' searches for self-definition.

According to theories of adolescent and career development, Jamaican students in the first form, with an average age of 12 years, are in the latency period (Erikson, 1968) or the fantasy stage (Ginzberg et al., 1951). At this stage, they can be expected to think about the desirability of an occupation but they do not possess the ability to assess their capabilities or the available opportunities. The expectation that they can become whatever they desire is purely arbitrary and heavily influenced by parental status

and suggestions of significant others. Career maturity is expected to be near the lower end of the continuum during this period (Crites, 1978b).

According to Crites' (1978b) formulations on periods of significant increase in career maturity, Jamaican students in the third form (average age 14 years) would be expected to be between the first and the second of these major spurts.

Jamaican students in the fifth form (average age 16 years) should be in the process of resolving ego identity issues (Erikson, 1968) and moving from the tentative period toward the realistic period (Ginzberg et al., 1951). Based on the developmental premises of these theories, they should be more oriented toward future satisfactions, consideration of interests and capabilities, and clarification of values. In addition, their vocational interests are expected to become more realistic and their choices more independent of the influence of significant others. Career maturity for this group should have advanced toward the higher end of the continuum (Crites, 1978b).

At the time of the study reported herein, there was an absence of any kind of supportive research on the applicability of the existing concepts of career development to Jamaican high school students. However, the limited information available on career maturity in cross-cultural populations validates the developmental gradient from

lower to higher career attitude maturity across grade levels (Achebe, 1975; Huang, 1974; Moracco, 1976). While the prototypic pattern of increase was in evidence in very diverse school systems outside the U.S., the career maturity scores of American students were significantly higher at all grade levels compared. A pattern of increase similar to that observed in other cross-cultural populations could be expected in the Jamaican high school students.

The concept of locus of control, with its focus on an individual's beliefs about control over life events, also provides a useful framework for understanding the development of career maturity. Persons with an internal locus of control believe that their achievements are determined by their own actions. Persons with a high external locus of control believe that their behavior is controlled by fate or powerful others (Rotter, 1966). According to Lefcourt (1976), conditions of dependency, a climate of fatalism and helplessness, and limited resources and opportunities which may exist within a developing country (such as Jamaica) are potential precursors to the development of an external locus of control.

Jamaican high school students have enjoyed a somewhat elitist status in the society (Cross, 1979). Leo-Rhynie (1983) has observed that their striving for success in the country's highly selective Common Entrance Examination has been often followed by complacency in the status of "high school student" and failure to assume

responsibility for their continued academic success. It is conceivable that this initial striving is externally motivated, a joint effort fueled by parents and teachers. In the developmental process, students are expected to progress from a position of external control, guided by parental admonitions, to a position where they process information through their own internal reference points (Knefelkamp & Slepitz, 1978). However, in Richardson's (1982) opinion, this process has not been encouraged in Jamaica's high schools.

In studies of locus of control expectancies in other societies, younger children have been found to be more external, with a shift toward internality occurring with increasing age (Lefcourt, 1976, 1983). In an exploratory study of locus of control development in Jamaican young people, Sinanan (1982) found support for this developmental process in the years from ages 12 through 18. There is convincing evidence by Sinanan (1982) that first and third form students in Jamaican high schools could be expected to score in the external direction and fifth form students to be more internal by comparison. However, it has been suggested that there are cultural determinants in Jamaica's high schools which may mitigate against the expected pattern of development of locus of control (Richardson, 1982). Also, Sue (1978) has stressed the importance of evaluating locus of control against a person's total cultural and social experiences. In a culture which values tradition, the family, or

social role expectations, an external locus of control, may be considered an adaptive response (Lefcourt, 1976). Hence, the pattern of locus of control development in Jamaica may be significantly different from the norms observed in industrialized societies.

Locus of control has been linked to both social and career maturity, to academic and career success, and to independent, self-motivated behavior (Gardner, 1981). For this reason, the locus of control construct has assumed some significance in studying the behavior of children and adolescents (Nowicki & Strickland, 1973). Students in this investigation have been classified as internal or external on the locus of control dimension on the basis of scores on the Nowicki-Strickland Locus of Control Scale for Children.

Statement of the Problem

The problem explored in this study was the lack of information about the career maturity of Jamaican high school students. The lack of realism in the career choices made by Jamaican high school students and their apparent inability to make appropriate career choices are phenomena which have been attributed to vocational immaturity (Westbrook, 1976).

Researchers have detected a certain immaturity in the career planning process of high school students in Jamaica (Jackson, 1974; Strudwick, 1985). The conclusion from these studies has been that Jamaican high school students have highly inflated occupational

aspirations that are independent of their performance in school, of parental occupation, or of social background. The great emphasis placed on education as a means of social mobility has contributed to this situation (Bacchus, 1978; Kuper, 1976).

Another aspect of this apparent lack of career maturity has been discussed by Jackson (1974). Not only did the students in Jackson's study seem unable to relate their actual academic performance and abilities to the competencies required for entry into the occupations to which they aspired, but they were also ignorant of the educational requirements of many occupations. Jackson also uncovered an underlying expectation among Jamaican high school students that significant others would pave the way for entry into the occupations they desired to pursue.

According to Jackson (1974), formal educational experiences did not seem to modify the career aspirations acquired at an early age through parental influence and these early aspirations, however unrealistic, tended to persist throughout the high school years. Jackson (1974) suggested that the educational aspirations and expectations of Jamaican students might have predated their enrollment in high school. Richards (1974) reported a similar finding concluding that the majority of Jamaican high school students in their terminal year had not modified the career preferences they had before entering school.

Ignorance about the options available in the world of work is a problem of great magnitude in many developing countries. In Nigeria, for example, the occupational knowledge of students was found to be limited to the major common occupations—law, medicine, and engineering (Arene & Durojavbe, cited in Drapela, 1979). Similar criticisms have been made of Jamaican high school students in view of their aspirations to a limited range of occupations regardless of their academic performance (Jackson, 1974).

The possibility raised above that students in Jamaica who enter high school at the age of 11 or 12 do not modify their career preferences during the adolescent years is contrary to prevailing theories of career development (Ginzburg et al., 1951; Super, 1953). The assumption among these theorists is that an individual goes from a fantasy-based choice to a more realistic one. An adolescent's vocational preferences are expected to become more specific, to agree better with reality, and to reflect greater independence of thought as he or she progresses through high school (Crites, 1961).

An appallingly high failure rate in both O-Level and A-Level Examinations has become commonplace for Jamaican high school students (Leo-Rhynie, 1983). This researcher contended that career immaturity, as evidenced by students' unrealistic career choices (Westbrook, 1976), is a possible contributor to the high incidence of academic failure of Jamaican students. Certainly the unwillingness of

students to take responsibility for their educational progress, coupled with the lack of guidance in course selection and in planning for available career opportunities have further contributed to the tremendous waste of human potential (Leo-Rhynie, 1983). A great percentage of Jamaica's high school students have obviously been failing to reach their career and educational goals; goals which are often not based on objective realities, but on parental aspirations for upward mobility (Bacchus, 1978).

In the present educational system, Jamaican students are prepared primarily for the next level in the academic hierarchy, escalating aspirations and expectations for professional occupations (Husen & Postlethwaite, 1985). The increasing failure to realize such aspirations and the disdain for alternative careers have led to disappointment for those unable to meet the criteria for entry into postsecondary institutions in Jamaica and forced to accept lower levels of employment than anticipated (Strudwick, 1985). The resulting tragic waste of human and material resources (Tedesco, 1983) provoked this inquiry into the nature of the career development process of the Jamaican high school population.

Jamaican students who find themselves trapped in an educational system that has been judged ineffective by Kuper (1976) could be expected to react with feelings of powerlessness and of being pawns of the system. While the increasing availability of education to all

students who qualify on the basis of the Common Entrance Examination has opened the channels of social mobility to all segments of the population, Kuper (1976) has charged that parental social class is still the major determinant of a student's prospects in Jamaican society. Indeed, students from a higher social background were found to be both more confident of furthering their education (Strudwick, 1985) and more likely to succeed in the General Certificate Examinations (Hamilton, 1979). Lefcourt (1976) postulated that externality may be a realistic response to social or political oppression or to the awareness of realistic obstacles within a society.

Jackson (1974) alluded to a possible external locus of control operating in Jamaican high school students whose educational aspirations and expectations were unrelated to their academic performance. If, as has been suggested by Jackson (1974) and Richards (1974), significant others are the prime motivators of career choice for Jamaican high school students, then the juxtaposition of career maturity with locus of control might further elucidate the career development process of high school students in Jamaican society.

Purpose of the Study

The major purpose of this study was to determine the differences in levels of career maturity and locus of control among first, third, and fifth form students in Jamaican high schools. A further

purpose of this study was to investigate the associations of gender, socioeconomic status, locus of control, and career maturity of Jamaican students at three grade levels: at the beginning (first form), near the midpoint (third form), and at the terminal period of high school (fifth form).

Research Questions

Research questions three and four below were investigated in an attempt to provide baseline data for the researcher concerning a comparison of levels of career maturity and locus of control between comparable Jamaican and American high school age groups. The remaining questions relate to the specific purposes of the study.

1. What is the difference in the level of career maturity among first, third, and fifth form students in Jamaican high schools?
2. What is the difference in the locus of control orientation among first, third, and fifth form students in Jamaican high schools?
3. What is the difference in the level of career maturity of first, third, and fifth form students in Jamaican high schools and students of similar ages in an American population?
4. What is the difference in the locus of control orientation of first, third, and fifth form students in Jamaican high schools and students of similar ages in an American population?
5. Are there differences in career maturity as a function of locus of control orientation classification in Jamaican high school students in the first, third, and fifth forms?

6. Are there differences in career maturity as a function of socioeconomic status in Jamaican high school students in first, third, and fifth forms?

7. Are there differences in career maturity as a function of gender in Jamaican high school students in the first, third, and fifth forms?

8. Are there differences in locus of control orientation as a function of socioeconomic status in Jamaican high school students in the first, third, and fifth forms?

9. Are there differences in locus of control orientation as a function of gender in Jamaican high school students in the first, third, and fifth forms?

Need for the Study

Changes in the political, social, and economic power balance of the world community, coupled with a new awareness of global interdependence have stimulated a growing interest in cross-cultural issues and alternative approaches to service delivery in the United States (McFadden, 1988; Pedersen, 1980). Counselor educators and counseling practitioners have recognized the increasing need for culturally effective counselors to work with the growing numbers of new immigrants and refugees in the context of a pluralistic society (Arredondo-Dowd & Gonsalves, 1980). The recent revision of standards of the Council for Accreditation of Counseling and Related Educational

Programs (CACREP) (McFadden & Quinn, 1987) also has heightened awareness of the ethical responsibility of counselors to operate from a solid base of cross-cultural competencies. There has been more attention to racial and ethnic minority topics in the past decade (Ponterotto, 1986). The focus, however, has been on the concerns of ethnic minorities and, to a lesser extent, on international visitors (Ruiz & Casas, cited in Ponterotto, 1986; Vontress, 1979). Research on educational concerns in the developing countries has, so far, been relatively neglected.

Concurrently, there has been a growing interest in establishing guidance and counseling programs in the schools in many developing countries (Heinzen, 1983; Okon, 1983; Webb, 1983; Yusuf & Bradley, 1983). These programs are usually staffed by professionals trained in the U.S., in counselor education programs set up in the American tradition in the developing country, or by international exchange programs such as Fulbright Scholarships or the Peace Corps (Heinzen, 1983; McWhirter, 1983; Webb, 1983). Stewart (1983), from his experience of seeing the failure of American ideas for want of a sufficient attempt to adapt them to the British educational system, has issued a warning to developing countries against inappropriate transfer of the counseling tools and techniques of the technologically advanced countries. Stewart's recommendation was to provide help for the leaders in developing countries to analyze their needs and then adapt practices within a culturally relevant framework.

Enthusiastic attempts by counselors and counselor educators to transport counseling practices to Ethiopia, Bolivia, and Nigeria, to cite just a few examples, have been unsuccessful (Heinzen, 1983; Okon, 1983; Yusuf & Bradley, 1983). Yet, the evidence from these Third World countries is that counseling is becoming a vital part of the educational program and service delivery could be facilitated with the appropriate technology (Heinzen, 1983). The experiences of practitioners in the developing countries endorse the need for careful scrutiny of the prevailing philosophy and the motivational patterns which influence behavior within a society before exporting tools for problem-solving (Heinzen, 1983).

At the time of the study, there had been no attempt to study career development patterns in Jamaican society. Anastasi (1976) has observed that the developmental stages through which individuals progress toward maturity may vary from one culture to another. Consequently, the generalizability of measurement devices and the automatic transfer of materials and research findings cannot be assumed (McFadden, 1988). Crites (1978b) considered it important to identify the career immature at an early age in order to provide opportunities for development of students with exceptional needs before the decision-making years. This procedure would also enable the Jamaican educators to utilize career resources more discriminatingly by targeting services to the most needy students.

If external factors such as parental influence or the prestige associated with a career have been judged as potentially more powerful determinants of career choice than the internal factors of ability, interest, and motivation (Jackson, 1974; Richards, 1974), then the locus of control construct could shed some light on this aspect of behavior in the Jamaican population. When Richards (1974) reported his findings indicating that the majority of students, regardless of academic standing, expected to achieve at least a bachelor's degree, he recommended research to identify the factors related to students' career choices in Jamaican high schools. Research activity at the University of the West Indies in Jamaica had not yet dealt with career guidance concerns (Phillips, 1985).

The relationship considered to exist between internal locus of control and a positive orientation to work, achievement, and career maturity may be specific to the American population. Whereas Gardner and Beatty (1981) and Gardner (1981) have found that internal locus of control is positively related to high levels of career maturity and intelligence, and Farmer (1978) has found that high externality bears a positive relationship to lower class status and low levels of achievement, Sue (1978) has characterized locus of control as a function of one's world view. However, there were no data at the time of the study to support or refute the applicability of these conclusions to Jamaican society.

It was believed that data collected in this study should provide answers to some important research questions designed to clarify the nature of locus of control and career maturity in a previously unstudied group. While some studies of career maturity have been conducted in developing countries, there had been no previous attempt to investigate the association of this variable with locus of control. This study also provided baseline data which could be helpful in screening for career immaturity, in assessing guidance needs, and in establishing and evaluating career guidance programs not only in Jamaica, but also in other societies which share a similar colonial, educational, and social heritage.

Rationale for the Study

In 1974, the General Conference of UNESCO adopted certain recommendations concerning education for international understanding and education relative to human rights and fundamental freedoms (Bolan & Seymour, 1978). The conferees called for the inclusion of an international dimension and a global perspective in education. Even more relevant to the purpose of this study was the plea for educators in the developed countries to show a sense of responsibility toward, and solidarity with less privileged groups and to take the initiative to devise ways to assist the developing countries. Warwick (cited in Triandis & Berry, 1980) has given direction to this appeal by reminding cross-cultural researchers of their obligations to respect

the priorities of the groups studied and to demonstrate sensitivity to their concerns and interests.

Most of the research on the culturally different has been in the U.S. and has been concentrated on disadvantaged groups who are usually behind the middle class in vocational maturity (Vasquez, 1979). With the democratization of education, Jamaican high school students have become increasingly more heterogeneous in terms of socioeconomic status (Whyte, 1983). Using parental occupation as a measure of socioeconomic status in Jamaican society, Hamilton (1979) established a link between performance in the General Certificate of Education examination and socioeconomic status. This link was independent of students' earlier success in the Common Entrance Examination.

Another relevant question for exploration was whether the development of career maturity would be similar for both males and females in Jamaican society. Although Crites (1972) considered gender-based differences to be negligible, Achebe (1975) and Huang (1974) found significant differences in career maturity as a function of gender in cross-cultural populations.

Considerable evidence has been amassed by Bigelow (1981), Curry (1980), and Gardner and Beatty (1981) to suggest a positive relationship between career maturity and an internal locus of control. Gardner (1981) expected that "achievers" would exhibit high internality and score high on career maturity. Since these studies

were all conducted with American populations, it seemed relevant to explore similar associations in the Jamaican high school population. In addition to the locus of control dimension, age, gender, and socioeconomic status were other factors included for their potential contribution to the understanding of both the career maturity and the locus of control constructs in the Jamaican high school population studied in the present investigation.

Definition of Terms

The terms below were used in this study according to the respective definitions provided.

Academic high school. This type of school, in Jamaica, has at least a 5-year program of study from form one through form five (Fisher, 1979).

Advanced Level Examination (A-Level). This is an examination taken at the end of upper sixth form as preparation for university entry. Preparation for the examination involves 2 additional years of high school beyond the fifth form. Students take two, three, and four subjects (Fisher, 1979).

Career maturity (also termed vocational maturity). This concept is used to indicate the degree of vocational development reached by an individual as measured by the ability to deal successfully with expected age-related developmental tasks, taking reality factors into consideration (Crites, 1961, 1978b).

Caribbean Examination Council (CXC). This refers to an examining board established in the English-speaking Caribbean area to allow for greater flexibility in type of curricula and examinations. The first public exams were given in 1979 (Fisher, 1979).

Common Entrance Examination. This is an examination taken at age 11 and over for entry into the academic high schools. Selection of participants for it is highly restricted (Richards, 1974).

Corporate area. This refers to the incorporated area of Kingston and St. Andrew. Over 50% of the population of Jamaica resided in this metropolitan area (Statistical Yearbook of Jamaica, 1986).

Developing country. "After the dissolution of colonial empires, the stage of development became an accepted basis for classifying nation-states, with the great majority of countries in Latin America, Africa, and Asia . . . becoming 'developing' countries and the Western industrial countries becoming 'developed' countries" (Husen & Postlethwaite, 1985, p. 2651).

Emic. This refers to an approach in which intercultural differences are viewed as clues to divergent attitudes, values, and assumptions that differentiate one culture from another in a relativist framework (Pedersen, Draguns, Lonner, & Trimble, 1981).

Etic. In this perspective it is assumed that all human beings are, in some important respects, alike; a universal definition of human behavior is assumed (Pedersen et al., 1981).

External. Persons classified as external on the locus of control dimension believe that events or outcomes are independent of their behavior and are the result of luck, chance, fate, or the influence of powerful others (Rotter, 1966).

Fifth form. "A fifth form student is in his or her final year of preparation for the examinations, usually GCE Ordinary Level" (Fisher, 1979, p. 22).

First form. This is the first year of secondary school. Entrance into the first form is based on performance in the Common Entrance Examination (Fisher, 1979).

Internal. Persons classified as internal on the locus of control dimension believe that events or outcomes are contingent on their own behavior (Rotter, 1966).

Locus of control. This construct refers to the belief of individuals as to whether the outcomes of their actions are causally related to their own behavior. The internal end of the locus of control continuum represents the belief that reinforcements or outcomes are contingent on one's own behavior, whereas the external end represents the belief that reinforcements or outcomes are independent of one's behavior and are the result of fate, luck, or powerful others (Rotter, 1966).

Obeahman. This is the name given to a practitioner of "obeah"--a healing system characterized by magical rituals, sorcery, and the use of medicinal herbs (McKenzie, 1986).

Ordinary Level Examination (O-Level). This examination is taken by fifth form students. Students may take from three through nine subjects (Fisher, 1979).

Post-colonial Jamaican society. Jamaica became an independent nation in 1962 after 307 years as a British colony (Phillips, 1985).

Sixth form. Students who qualify on the basis of success in the O-Level Examination may spend 2 additional years in high school in the sixth form, made up of lower and upper sixth. These years are intensive preparation for university entry (Fisher, 1979).

Socioeconomic status (SES). Miller's Occupational Coding Scheme, a scale based on parental occupation in Jamaican society, was used as the measure of SES in this study (Miller, 1971).

Overview of the Study

In Chapter II, is presented a review of literature related to the development of career maturity and its relationship to locus of control in high school students. Also, the theoretical framework is expanded and discussed.

In Chapter III, the educational system in Jamaica and the population from which the sample was selected is described. Support for the validity and the reliability of the instruments used is included. Detailed descriptions of the sampling procedures, and the procedures used in collecting, recording, and assessing data are also given.

The findings of the study are presented in Chapter IV. In Chapter V, the obvious and implied conclusions are discussed and recommendations are made for practice and for further research in this area.

CHAPTER II REVIEW OF RELATED LITERATURE

Overview

The educational system transported to the West Indies by the British has been described as irrelevant for the region (Whyte, 1983; Williams, 1968). Alarming failure rates in the O- and A-Level Examinations which are the hallmark of success in the Jamaican academic high schools have concerned educators and economists. Educational researchers in Jamaica have, for many years, demanded changes in the curriculum and method of course selection for students but lack the resources for making meaningful changes (Leo-Rhynie, 1982).

The concept of career development is a fairly recent one, therefore, there is minimal research on career development in Jamaica and, indeed, in the developing countries. For this reason, the literature on career maturity and locus of control is reviewed from a global perspective with appropriate emphasis on cross-cultural studies.

In this chapter, the researcher provides support for the theoretical framework and offers additional support for the need for the study and the approach used in the study.

Historical Background

Jamaica is one of the most rapidly developing countries in the world with a population of 2,325,500 in 1985 (Statistical Yearbook of Jamaica, 1986). It is the third largest of the Caribbean islands, a group of islands that stretch from near Florida in the United States to the Venezuelan coast of South America. In spite of differences in size, heritage, language, history, and political system, these islands have strong cultural similarities as a result of a common history of foreign domination ("Caribbean Cultures," 1982). The blending of European, Chinese, East Indian, and African influences has given the region a multicultural and polyethnic flavor. English is the official language in all present or former British colonies in the West Indies, although local dialects are widely spoken (McKenzie, 1986).

The idea of a public system of universal education in the West Indies was introduced, with the act to abolish slavery, in the House of Commons in England by government officials and religious leaders in 1833 (Gordon, 1969). The curriculum and teachers imported to the region were welcomed uncritically for the opportunities they offered. Subsequently, this uncritical acceptance of the imported and, at times, irrelevant curriculum has been lamented as a catastrophe by Williams (1968) and a luxury which the strained financial resources of the developing West Indian nations, including Jamaica, cannot afford (Cross, 1979).

In 1968, Williams, a West Indian leader and educator, observed post-primary education is almost exclusively limited to one kind of school, the academic college-preparatory type, pointing towards the clerical, official, and professional callings. (p. 12)

There is still an element of truth in this statement.

Kaplan, Blutstein, Johnston, and McMorris (1979) have described the academic high schools in Jamaica as the oldest and most prestigious of the schools providing secondary education. Their enrollment accelerated after Jamaica's independence in 1962 when new policies in education opened up these elite college-preparatory schools to all who qualified on the basis of the Common Entrance Examination, regardless of economic status. Kuper (1976) described the position of Jamaica's academic high schools as privileged in terms of having the most qualified staff, lower pupil-teacher ratios, and better equipment. The technical high schools, the vocational high schools, and comprehensive schools have been more recently established and lack the prestige of the traditional high schools (Richards, 1974).

Attempts began in the post-World War II years to transform Jamaica's fairly static economy, dependent on agriculture, tourism, and bauxite, to a more diverse and dynamic one with a growing industrial and manufacturing sector (Mandle, 1982). These attempts have created an increasing demand for workers skilled in new and varied emerging professional and technical areas. Richards (1974) has

stated the dilemma of Jamaican high school students who are forced to make career decisions against the background of the social pressures of the past and the often conflicting occupational needs of the present.

A review of the literature suggests that the situation has not changed significantly in the intervening years. The increasing disenchantment with formal education as the key to national development has been documented by Husen and Postlethwaite (1985). So has the continuing discrepancy between the needs of the labor force and the role of the high school in which students are prepared primarily for the next step in the academic hierarchy.

Role of Education in Developing Countries

Education had been expected to guarantee greater productivity and income equality for Jamaica as well as for the other developing countries (Tedesco, 1983). Although democratization has been achieved to a greater extent in education than in any other sphere of the social structure, the criticism continues for its failure to be the expected instrument of social, as well as economic, mobility (Tedesco, 1983).

The democratization of the secondary schools in Jamaica was accomplished, at first, through the provision of scholarships (Gordon, 1969) and ultimately through tuition-free education for those meeting the selection criteria (Leo-Rhynie, 1982). This policy tremendously

increased the availability of secondary education to a wider cross-section of the population and led to the quadrupling of expenditure on secondary education in the past 25 years (Phillips, 1985).

There has been an ever-growing number of students, pioneers within their families and potential beneficiaries of the increased educational opportunities who have been entering the secondary schools. Parents have perceived education as the key to achievement and to a better life for their offspring; consequently, through self-denial, thrift, and hard work, they have invested heavily, financially and emotionally, in their children's education (McKenzie, 1986). They have been, however, handicapped in offering them the needed guidance or direction.

A high regard for education has been nourished in the West Indian population (Bacchus, 1978). High expectations and aspirations for their children may lead West Indian parents to impose rigid controls on their children in a very autocratic manner (Louden, 1978). Close supervision, dependency, and the encouragement of close affective ties with aunts, uncles, grandparents, cousins, and family friends have been prevalent in the developing countries (McKenzie, 1986). This expansion in educational opportunities has created high aspirations for a larger segment of the population, but, given the extraordinarily high failure rates in external examinations (the acme of educational achievement), the effectiveness of the current system has to be questioned.

Responses to address this problem of a tremendous discrepancy between aspirations and their realization have come from politicians (Manley, 1974; Williams, 1968), educators (Gordon, 1969; James-Reid, 1982; Leo-Rhynie, 1982; Richards, 1974), and anthropologists (Cross, 1979; Kuper, 1976). Richards (1974) proposed the redesigning of secondary education—a broadening from the colonial concept which would enable the inclusion of a wider range of interest and abilities among the students in post-independent Jamaica. Academic education has enjoyed a position of prestige and a preferred status up to the present time. Non-academic education has rarely been a matter of choice but rather a second-best alternative (McKenzie, 1986; Richards, 1974).

How can a country such as Jamaica cope with this problem of rising expectations which are not being met? How can the twin problems of a high rate of academic failure and large numbers of unemployed youth be surmounted? A primary concern in the developing countries is to maximize the human resources. Still, the ineffectiveness of the present educational system is not to be judged solely by the increasing failure rate in external examinations (Cross, 1979). In the opinion of this researcher, an even greater failure has been the resulting narrowness of focus in the goals of students in the high schools; whereas, schools should properly result in a broadening of options.

Ignorance about the options available in the world of work is not unique to Jamaican students. Indeed, it is a problem of great magnitude in many developing countries. The occupational knowledge of Nigerian students was found to be limited to the major common occupations, i.e., law, medicine, and engineering (Arene & Durojavbe, cited in Drapela, 1979). Similar criticisms have been made of Jamaican high school students in terms of their aspirations to high level occupations, and ignorance of the entry requirements (Jackson, 1974).

For several years, the concept of educational planning as a viable tool for economic progress in developing countries has been discussed (Adams & Bjork, 1969; Whyte, 1983). Adams and Bjork urged a broadening of the concept of secondary education to make it an outlet into industry and agriculture, instead of primarily an avenue into a university. These educators also proposed the introduction of programs to change vocational attitudes and concepts, including the prevalent fatalistic belief that events cannot be predicted or controlled. In addition, Whyte (1983) also advocated a role for education as the transmitter of values and attitudes, not just of skills and knowledge.

Pemberton (cited in Drapela, 1979) expressed the need for counseling to be the catalyst for improving the educational system in developing countries and for helping young people come to terms with

their changing culture. Pemberton reported on the notable success in Brazil where legislators have recognized occupational and career guidance as primary objectives. This change in approach has resulted in more realistic career choices and improved adjustment to the world of work in the case of Brazilian students.

One of the goals of career education is the broadening of educational and occupational options for students by providing increased opportunities for self-awareness and knowledge of the world of work (Hoyt et al., 1974). This exposure would enable students to base their career choice in reality and lay aside the myth that a 4-year degree is the best route to occupational success in Jamaica (Richards, 1974). Such an approach would enable students to appreciate the value of all their educational experiences. The need to increase the technical and practical content of the curriculum and to shake off the residual influence of the British colonial system has been recognized as a way to increase the relevance of education to the needs of the job market (Kaplan et al., 1976). James-Reid (1982) has linked this growing demand for relevance to the creation of the Caribbean Examination Council (CXC) which offers an alternate system of examinations. Early reports on the failure rates in the newly implemented CXC examinations are discouraging (E. A. Leo-Rhynie, personal communication, July 5, 1987).

Richards (1974), in a study of the occupational aspirations of Jamaican high school students, underlined the discrepancy between

students' aspirations and variables such as curriculum, academic aptitudes, and employment outlook in Jamaica. The present system seems to encourage inconsistencies between aspirations and their realization, creating frustration for those unable to meet the criteria for entry into a postsecondary institution in Jamaica. Students could be expected to react to such harsh realities with feelings of powerlessness and of being the pawns of the system, especially since Jamaican society has been characterized as accepting rather than inquiring (Figueroa, 1971). In the post-independent period, leaders have stressed the need for people to change their "psychological dependence" in viewing God, the government, or the "obeahman" as both the cause of, and the solution to, their problems (Leo-Rhynie, 1982).

Support for the Theoretical Framework

Locus of Control

The concept of locus of control is a major aspect of Rotter's (1966) social learning theory. According to Rotter, an individual's psychological orientation may be internally or externally controlled. Internal-control (IC) persons believe that reinforcements are contingent on their own actions. External-control (EC) persons, on the other hand, believe that their behavior is controlled by fate, luck, or powerful others. High internal orientation has been linked to academic, career, and overall life satisfaction in the western

world, but Sue (1978) has cited research valuing high externality in the Chinese culture. Sue has also pointed out that where opportunity is unequal, feelings of powerlessness may be indeed a realistic assessment of the discrepancy between ability and attainment.

Farmer (1978) summarized characteristics of persons who are internal as follows:

1. They choose careers which are more consistent with their values, interests, competencies, and potential.
2. They seek more complete information for career decision-making and assess themselves and their resources more realistically.
3. They develop more feasible plans for overcoming obstacles to their career goals.
4. They engage in moderate risk-taking.

Farmer described persons with external orientation in this way:

1. They tend to be more diffused about long-range career goals.
2. They tend to be less competent in information seeking, planning, and evaluating their plans.
3. They are more likely to take such high risks as to make it easy to rationalize failures.
4. They tend to be easily discouraged and to underestimate their progress.

There is some evidence to suggest that the concept of locus of control has to be applied judiciously in dealing with non-American

cultures. Socialization patterns, national traditions and customs, and value systems may affect the direction of one's locus of control (Furnham & Henry, 1980). Lefcourt (1976) acknowledged the possibility that "groups whose social position is one of minimal power either by class or race tend to score higher in the external direction" (p. 212). Other researchers have recognized this phenomenon of external control among ethnic group members (Hsieh, Shybut, & Lotsof, 1969), lower-class persons (Battle & Rotter, 1963), and women (Farmer, 1978).

Sinanan (1982) endorsed the view that Jamaicans have a tendency to rely on external forces to solve their problems. Loudon (1978) found a group of West Indian adolescents (including Jamaicans) in Britain to be significantly more external than their Asian or English peers. One explanation he offered for this finding was their experience of dealing with the dominant culture as members of a deprived group. Loudon (1978) further expressed skepticism that internal control could develop in this population given the inconsistency observed in child-rearing patterns: a combination of permissiveness and repression.

Sue (1978) stressed the importance of considering an individual's world view in evaluating his or her locus of control orientation. It is possible for externality to be adaptive in a culture which values tradition, the family, or social role expectations. However, externality may also be a realistic response to the negative forces of

racism, political oppression, or realistic obstacles in a society (Lefcourt, 1983).

Theories of Career Development

The following theories of career development were judged to have some degree of usefulness for exploring the career development process of students in a developing country such as Jamaica. Ginzburg et al. (1951), while subscribing to a developmental theory of career development, were, nevertheless, cognizant of the fact that young people who grow up in adverse circumstances do indeed have fewer options for creating "optimal fit" between preparation, goals, and the realities of the workplace.

Super (1953, 1957) is the chief proponent of the developmental career counseling approach. Super viewed vocational development as only one aspect of the individual's total development. Personal, social, and environmental factors were all considered to have a bearing on the individual's educational and vocational decision making. It was Super who introduced the term "vocational maturity" which was later replaced with "career maturity" by Crites (1973). Vocational or career maturity denotes the degree of development in an individual along a continuum ranging from exploration to decline. The individual who has fully developed an awareness and a "readiness for choice" is considered to be "career mature" (Super & Overstreet, 1960).

Career maturity has been identified by Super (1955) as a key concept in vocational development. The basis of this concept, formulated by Ginzburg et al. (1951), is that occupational choice is a developmental process, progressing through distinguishable periods from a fantastic (age 6 through 11), through a tentative period (age 12 through 17), to a realistic orientation (from age 18 onwards). This pattern of progressive increase in vocational maturity by age has been validated for cross-cultural applications (Achebe, 1975). The first and third form Jamaican students in this study, based on the premises of developmental career theory, could reasonably be expected to be at the fantastic stage; the fifth form students to be at the realistic stage.

Munley (1975) found that low career maturity affected students' total functioning, signaling difficulties in resolving the developmental crises (Erikson, 1968) and in making age-appropriate decisions. He recommended preventive programs aimed at early intervention in students' educational and career development.

At the opposite end of the spectrum from the developmental approach is a group of theories which Hoppock (1976) has linked together by virtue of their inclusion of economic, family, and cultural influences as the determining factors in the career choices of many. At the time of the study, no theoretical base had been formulated for exploring career development issues in Jamaica;

however, this group of theories, termed the accident theory (Caplow, Clark, Hollingshead, Miller, & Form, cited in Hoppock, 1976), seemed very pertinent to the prevailing attitude toward career decision making in Jamaican society. The accident theory supports the point of view of common sense that economic and sociological factors limit the options open for an individual's consideration. The accident theory is briefly summarized below.

Caplow (1954) is the chief proponent of the accident theory. Based on the evidence of sociological research, he viewed the career choice process as a result of error and accident. He has suggested that a career is chosen as a means to an end at a time when a student is remote from the reality of the world of work. Evaluation of one's satisfaction comes as an afterthought, very late in one's career, when there is no scope for realizing one's potential.

Observations of students in the West Indies and of the varied international population in the United States support the accident theory as operative in many parts of the world. Pressure to choose a career can be exerted in many ways: limitations in the curriculum, constraints of the family or the occupational environment, one's current or desired status, or inequalities in the prestige or salaries of many careers.

The preceding theoretical framework has "painted a backdrop" against which the career maturity attitudes of secondary school

students in a developing society may be examined. The focus was narrowed to theories of career development that were thought to be of significance in studying a population such as Jamaica's.

Career Maturity

Career maturity has been identified by Super (1955) as a key concept in vocational development. The basis of this concept is that occupational choice is a developmental process, progressing through distinguishable periods from a fantastic to a realistic orientation (Ginzberg et al., 1951). The individual's progress in fulfilling a given set of vocationally relevant developmental tasks is assessed in relation to his or her peer group (Crites, 1961). As vocational behavior matures, the individual is expected to become more goal-directed, more realistic, and more independent (Super & Overstreet, 1960). This pattern of progressive increase in vocational maturity by age has been validated for cross-cultural applications (Achebe, 1975).

This "readiness for choice," i.e., career maturity, was one of the variables explored in this study. Many researchers have investigated the relationships between career maturity and a number of sociological and psychological variables. The effects of gender, grade level, socioeconomic status, urban/rural residence, as well as intelligence, achievement, ego identity, and cultural differences have been studied.

Crites (1965) reported few differences between the development of career maturity in boys and girls.

Currie (1973) studied adolescents in urban, suburban, and rural settings. He reported that adolescents from the middle-class were higher in vocational maturity and vocational awareness than those from the lower class, whites were higher than non-whites, and females higher than males in their vocational maturity.

Franklin (1975) compared the vocational maturity of junior high and 12th grade vocational students. He found significant differences related to age, sex, grade level, race, and IQ. Socioeconomic status proved to be nonsignificant.

Palmo and Lutz (1983) found a positive relationship between high scores on the Career Maturity Inventory (CMI) and higher scores on the Wechsler Adult Intelligence Scale (WAIS) in a disadvantaged population. The Vocabulary and Comprehension subtests accounted for large amounts of variation in all the CMI scores. They suggested that past academic success or general overall ability may be possible methods for assessing career maturity.

Phillips (1975) found a positive relationship between vocational maturity and grade point average among college freshmen. He suggested that feelings of powerlessness may inhibit exploratory behavior and retard vocational development.

Smith (1974) compared 995 11th and 12th grade students in a rural area with 1,126 in an urban school system. The total sample of urban

students scored significantly higher than the rural students on the Attitude Scale of the CMI. Higher scores on this measure were obtained by students in the college preparatory curriculum than those enrolled in the vocational curriculum.

The findings of Smith (1976) in a study of 188 lower socioeconomic black high school seniors were somewhat similar. The college-bound students in this group who subscribed to middle-class values obtained higher vocational maturity scores than their work-bound peers. Smith interpreted the low scores of the others as indicative of a need for considerable educational and vocational counseling as a means of enhancing their career development.

Williams (1975) investigated the career maturity of 88 black 11th and 12th grade students. There was no significant difference between the sexes, but there was a significant difference between grade levels. The comparison group was less career mature than Crites' (1973) reference group, suggesting a developmental lag in the group studied.

The results of these studies are somewhat inconclusive with regard to gender; however, middle-class status, academic ability, age, and urban residence seem to be consistent indicators of mature career attitude. These findings lend support to the argument that the CMI is culture-bound, and that American middle-class phenomena have been the premise underlying vocational development theories (Maynard, 1970).

With this in mind, Achebe (1975) explored the vocational development pattern of students in the East Central State of Nigeria to determine the applicability of Super's (1953) theory of vocational maturity. The study involved 400 classes of boys and girls in grades 7 through 10 in rural and urban schools. Boys scored higher than girls and urban students higher than rural ones on the Attitude Scale. Achebe concluded that the vocational maturity of the Nigerian sample showed a prototypic pattern of progressive increase by age, and especially by grade, validating the developmental theory of vocational maturity for cross-cultural application.

Other researchers have compared the vocational maturity of American students and Chinese (Huang, 1974) and Arab students (Moracco, 1976). They have provided some evidence of the potential usefulness of the CMI to cross-cultural populations.

Huang (1974) studied the career attitude of 332 Americans and 291 Chinese students in Taiwan. Students were from grades 6, 9, and 12. In each culture, he found that career maturity increased with grade level, that females tended to be more mature than males in career attitudes, and that scholastic achievement correlated positively with career maturity. In Chinese culture, higher socioeconomic levels were associated with higher levels of career maturity. The career attitudes of American students were more mature at the three grade levels. In discussing these findings, Huang suggested that cultural

factors, particularly the authoritarian nature of the Chinese family, and the status of guidance programs were possible factors contributing to these differences.

In Moracco's (1976) study, American students residing in Lebanon were compared with Arab students in a college preparatory school. The students were from the 9th and the 11th grades and their counterparts in the Arab school system. Students were all from the middle and upper classes. There was a significant difference between the scores of the 9th and 11th graders at both the American and Arab school and between the scores of the American and the Arab students. The results supported the monotonic relationship of the CMI to grade level for the Arab students. An analysis of response trends of Arab students revealed significantly lower scores on items expressing independence, degree of involvement in the career choice process, and criteria for job selection.

Since cultural differences are reflected in responses to the CMI, care needs to be taken in interpreting scores. Anastasi (1976) indicated that the developmental stages through which individuals progress toward maturity may vary from culture to culture.

Support for the Need for this Study

This study provides information which should contribute to an understanding of the development of career maturity and locus of control in Jamaican high school students.

For most of its history, counseling has been slanted in the etic, or universalistic, direction with the assumption that techniques or tools which proved useful in one culture would transfer directly to another (Pedersen et al., 1981). The danger inherent in this approach is the tendency to view phenomena which are alien to one's experience as pathological. It becomes imperative, therefore, to study concepts from an emic approach, i.e., within the context of the society.

In today's global village, the migration of career counseling theories and practice is likely to escalate (Heinzen, 1983). Toffler (1980) has very graphically described the waves of change buffeting societies in the decade of the 1980s. Many countries are caught in the simultaneous impact of two, sometimes three, different waves of change moving at different rates of speed. The developing countries are still caught up in the first wave of the agrarian society, struggling to keep pace with industrialization and looking for new answers to the age-old questions of resource management.

Career guidance and counseling services in the United States have evolved as a response to options created for young people by industrialization and the democratization of opportunities (Super, 1983). National adversity has played a major role in stimulating vocational guidance. Smith, Engels, and Bonk (1985) have cited specifically the influx of immigrants in Boston at the turn of the century, the Great Depression of the 1930s, and World War II as

situations in which social, educational, and economic needs have contributed to the evolution of career development in the schools. A similar situation and similar needs exist in Jamaica and in other post-colonial societies struggling for more efficient management of their educational resources (Tedesco, 1983).

There was extremely sparse research on the career development process of students in Jamaica, in the West Indies, and in the developing countries at the time of the study. Jackson (1974) and Richards (1974) have explored the relationships of Jamaican students' career aspirations and expectations. Richards (1974) indicated that students rejected nonprofessional occupations and aspired toward professional or administrative careers. More recently, McKenzie (1986) observed a similar phenomenon among West Indians in the United States.

Richards' (1974) findings regarding the aspirations of Jamaican students help to emphasize the need for acquiring baseline data on career maturity and for implementing career guidance programs in Jamaica. Following is a summary of findings which suggest both a narrowed focus and inconsistency in the goals of Jamaican high school students.

1. Over 79% of the students in Richards' study perceived secondary education as preparation to enter tertiary institutions.

2. About 80% of the academic high school students, 63% of the technical high school students, and 68% of the vocational high school students had aspirations to enter professional occupations.

3. Over 67% of the total sample expected to enter the labor market on leaving the secondary school.

Success for the Jamaican student is measured by passing the Common Entrance Examination, then the General Certificate of Education, then entering a university, and finally, securing a position in one of the prestigious occupations. The results of the GCE examinations indicate that an overwhelming majority are destined to fail in this process of successive elimination (Leo-Rhynie, 1982). This system of career selection clings to outmoded views of status and prestige and, so far, has undergone only moderate change (Strudwick, 1985).

To date, attempts to revitalize formal education have been concentrated on curriculum changes and on creating a variety of school types (Whyte, 1983). Up to this time, student attitudes and motivation have been ignored as avenues for exploration. This research provides a base for practitioners to devise programs grounded in a sound theoretical structure of career development and a developmental approach to human functioning. Locus of control and career maturity both contribute to this framework for examining the decision-making process for students at certain ages in Jamaica's high schools.

Copeland (1983) commented on the increasing need in the developing countries for formal guidance programs. The need for such

programs to be constructed around locally generated data is crucial to ensuring maximum utility within the sociocultural structure of the society. Accurate knowledge of the characteristics of the population and level of readiness for decision making must precede development of programs or materials (Heinzen, 1983). The data generated by this research study can also set the stage for dealing with values, in the classroom and in the workplace.

Hamilton (1979) established a link between socioeconomic status (SES) and academic achievement of Jamaican high school students. She found that students from the upper SES performed better in the General Certificate Examinations (Ordinary Level) regardless of their performance in the Common Entrance Examination. These results were more marked for urban than for rural students. There are strong indications from the studies reviewed that locus of control and career maturity may be affected by SES, yet both seem amenable to change. When the relationship among these variables are better understood for Jamaican high school students, administrators, counselors, and teachers will have more relevant information to plan appropriate career interventions.

There is some potential usefulness for the results of this study beyond Jamaica's borders. McKenzie (1986) deplored the virtual absence of a base of knowledge for working with English-speaking West Indians in the United States. The West Indian-American population in

New York City has been estimated at 1 million (Trebay, 1984) and throughout the United States at 4.5 million (Noel, 1986). As with other minority groups, there is evidence that they participate minimally in counseling (McKenzie, 1984). One of the obstacles to better understanding is that professionals have failed to treat West Indians as culturally different from other black subcultural groups (McKenzie, 1986). Axelson (1985) also realized the danger in ignoring heterogeneity within racial and ethnic groups.

There is no attempt to suggest that the results of this study will generalize completely to post-colonial societies or, more specifically, to the Anglophone West Indies. However, the shared historical, sociocultural, and educational heritage of these countries will ensure some degree of relevance of the findings of this study to students of other post-colonial societies. The findings of this study also have the potential for triggering comparative research along the dimensions of career maturity and locus of control in other areas of the English-speaking West Indies.

Support for the Approach to the Study

In this study, the constructs of career maturity and locus of control of Jamaican high school students at three different levels of development were investigated. The relationship between these two variables was also examined. In addition, this study enabled the exploration of the effects of the variables of students' grade level,

gender, and socioeconomic status. The literature on career development has repeatedly demonstrated the contribution of these variables to vocational attitudes and behaviors (Crites, 1978b; Herr & Enderlein, 1976).

The Career Maturity Inventory (CMI) which was used to determine career maturity has been extensively used in the United States (Hansen, 1974; Moore & McLean, 1977; Palmo & Lutz, 1983). It has also been used with cross-cultural populations and has proved to be effective in discriminating among levels of career maturity. The CMI was used in studies of Nigerians (Achebe, 1975; Ifenwanta, 1978), Chinese (Huang, 1974), and Arabs (Moracco, 1976). The hand-scoring option and the short administration time both contribute to making this test an economical and efficient way to obtain diagnostic and assessment information. The CMI is discussed in detail in Chapter III.

Locus of control orientation has been hailed as one of the most useful recent developments in personality theory (Stanley, Hyman, & Sharp, 1983). This concept, introduced by Rotter (1966), has provided a useful framework for studying human behavior. Helplessness, luck, and achievement have been identified as factors by Nowicki (cited in Furnham & Henry, 1980) and replicated in studies done by Barling and Fincham (1978). Locus of control has been shown to be amenable to change, leading to greater realism in decision-making (Gardner, 1981).

In view of the fact that Jamaican society has been described by Figueroa (1971) as accepting rather than inquiring and "psychologically dependent" (Manley, 1974), it seemed promising to explore the belief system of Jamaican high school students along the internal/external orientation continuum in this study.

Career Maturity and Locus of Control

Nowicki and Strickland (1973) welcomed the promise offered by locus of control for targeting remedial action with students. Based on the expectation that those with internal locus of control would be the "achievers," Gardner (1981) has hypothesized a positive relationship between internality and career maturity. There is considerable evidence that behaviors and attitudes linked to one's "work personality" (i.e., job performance, career choice, and acceptance of responsibility) are related to both locus of control and career maturity (Bigelow, 1981; Curry, 1980; Gardner & Beatty, 1981). Ifenwanta (1978) found a significant relationship ($r=.49$) between these two variables in a male and female group of Nigerian college students in the United States.

In an investigation of the relationship between career maturity and locus of control in a population of high school seniors, Wilson (1975) found externality to be negatively correlated with career maturity. He also found significantly higher scores, indicative of externality, in the females than in the males in the group studied.

Techniques for changing locus of control from external to internal have been found to have a positive impact on career maturity (Curry, 1980; Gardner, Beatty, & Bigelow, 1981). In an experimental study, 28 females and 20 males were assigned randomly to treatment and control groups. The treatment consisted of 45 sessions of career education/life planning. The experimental group in this study was found to be significantly higher on both measures of career maturity and locus of control during the last week of treatment (Gardner et al., 1981).

McClelland and Winter (1969) have also had considerable success in motivating individuals to increase their sense of control over their own destiny. Clients in the program they devised developed greater understanding of themselves, of their strengths and limitations, of their values and aspirations.

It was important to the researcher to conduct research that would have immediate potential applications within the society being studied. Warwick (cited in Triandis & Berry, 1980) emphasized the obligations of cross-cultural researchers to respect the priorities of the groups being studied and to show sensitivity to their interests and concerns.

Summary

Education has long been perceived in Jamaica as the key to social and occupational mobility. This has engendered for it a high regard,

especially for the academic education provided by the prestigious academic high schools.

Political independence has democratized secondary education and created equal educational opportunities within Jamaican society. In order for these newly created opportunities to benefit individuals and the nation, there is an urgent need for more relevant educational planning to counteract the widescale educational failure and vast numbers of unemployable Jamaican school leavers without marketable skills.

Recommendations for more relevant programs have broadened the scope of secondary education to include alternative types of schools and examinations. In the Jamaican academic high schools, however, educators have unwittingly colluded in narrowing the focus of students instead of broadening their career options. Career choices seem to be frequently prematurely made without a realistic assessment of self or of the world of work.

This review of literature has indicated agreement among career theorists that career mature individuals make more appropriate and more realistic career choices. Relationships have been explored among career maturity, locus of control, and a number of sociological and psychological variables. For the most part, these links have been established for populations in the United States; however, some researchers have explored these variables in non-western,

non-industrialized populations. To avoid misunderstanding and misinterpretation of the findings, attention has been drawn to the observed variations in development across cultures.

CHAPTER III METHODOLOGY

The educational system transported to the West Indies by the British has been described as a catastrophe for the region (Williams, 1968). Cross (1979) referred to it as "more the consequence of history" than "the initiator of change" (p. 124). The criticism has been leveled that the current archaic system has failed to keep pace with the area's need for technically-skilled workers (James-Reid, 1982; Richards, 1974; Whyte, 1983). Moreover, the cost of providing a secondary education to a wide cross-section of Jamaican society has consumed a large proportion of national income without making a significant contribution to social or economic equality (Cross, 1979; Tedesco, 1983). For this reason, educators and social scientists have become alarmed at failure rates of over 70% in overseas examinations, the chief criterion of educational success for Jamaican high school students and have been searching for a more relevant educational system which would enhance students' educational and career development (Leo-Rhynie, 1982). Social and economic needs have, in other societies and in other periods in history, created waves of change in education and stimulated career development in the schools (Smith et al., 1985).

The problem explored in this study was the lack of knowledge of career maturity of Jamaican students. The lack of realism in career choice which has been noted among Jamaican high school students and the inability to make appropriate career choices have, in other cultures, been attributed to vocational immaturity (Westbrook, 1976). Allusions have also been made that the majority of Jamaican high school students have decided definitively on careers selected by significant adults during the fantasy stage of career development (Jackson, 1974; Richards, 1974). For this reason, the exploration of the relationship between career maturity and the students' locus of control orientation was warranted.

The purpose of this study was to investigate the career maturity of high school students at three grade levels in corporate area high schools in Jamaica. A further purpose of this study was to investigate the associations of grade level, locus of control orientation, gender, socioeconomic status, and career maturity at the same three grade levels: one at the beginning, one at the midpoint, and one in the terminal year of the regular high school program. Further, to provide baseline data, a comparison of levels of career maturity and locus of control was made between Jamaican and American students of equivalent age groups.

In this chapter the research methodology is described. Topics presented are the research hypotheses, the description of the

population and the sample, the description of the instruments used, assessment techniques, research procedures, and data analysis techniques.

Research Hypotheses

The .01 level of significance was set for the analyses of variance and for the t tests. The null hypotheses tested in the study were as follows:

Ho 1: There is no significant difference in the level of career maturity of first, third, and fifth form students in Jamaican high schools.

Ho 2: There is no significant difference in the locus of control orientation of first, third, and fifth form students in Jamaican high schools.

Ho 3: There is no significant difference in the level of career maturity of first, third, and fifth form students in Jamaican high schools and students of similar ages in an American population.

Ho 4: There is no significant difference in the locus of control orientation of first, third, and fifth form students in Jamaican high schools and students of similar ages in an American population.

Ho 5: There is no significant difference in career maturity as a function of locus of control orientation classification in Jamaican high school students in the first, third, and fifth forms.

Ho 6: There is no significant difference in career maturity as a function of socioeconomic status in Jamaican high school students in the first, third, and fifth forms.

Ho 7: There is no significant difference in career maturity as a function of gender in Jamaican high school students in the first, third, and fifth forms.

Ho 8: There is no significant difference in locus of control orientation as a function of socioeconomic status in Jamaican high school students in the first, third, and fifth forms.

Ho 9: There is no significant difference in locus of control orientation as a function of gender in Jamaican high school students in the first, third, and fifth forms.

Research Design

Data were collected on students' career maturity and locus of control orientation by administering the Career Maturity Inventory--Attitude Scale (Crites, 1978a) and the Nowicki and Strickland (1973) Locus of Control Scale for Children. In addition, the following demographic information was collected: name, sex, form (i.e., grade level in the Jamaican high school), and occupation of parents.

Population and Subjects

Students are normally admitted to the Jamaican academic high school in the first form at a minimum age of 11 years on the basis of their performance in the Common Entrance Examination which is used to identify for selection the top 10% of the primary school population (Fisher, 1979). At the end of 5 years, students normally take the

General Certificate Examination (Ordinary Level) of the University of Cambridge. They may choose to leave school at this time for technical, commercial, or lower levels of professional training, such as elementary school teaching or nursing, or entry into the civil service. Students with higher levels of achievement may spend 2 additional years in the sixth form (lower and upper) to prepare for university entrance in three or four academic disciplines. The exit examination for sixth form students is the Advanced Level of the General Certificate Examinations set by the University of Cambridge in England (Phillips, 1985). The fifth form year then is the terminal year for the majority of students and, obviously, one in which major career decisions are made.

The population for this study consisted of all first, third, and fifth form students attending academic high schools in the corporate area of Kingston and St. Andrew, Jamaica. According to the most recently published educational statistics for Jamaica (1983-1984), the total number of boys enrolled in corporate area high schools was 11,536, and the total number of girls was 15,603. This means that just under 50% of the total high school student population (55,749) was enrolled in corporate area schools. In the last population census, the corporate area population was 50% of the total island population of 2,325,500 (Statistical Yearbook of Jamaica, 1986).

The sample for this study was drawn from the first, third, and fifth form students of academic high schools in the corporate area.

There were 1,323 boys and 1,798 girls in the first form; 1,494 boys and 1,773 girls in the third form; and 1,418 boys and 1,718 girls in the fifth form in the corporate area high schools in Jamaica (Educational Statistics for Jamaica 1983-1984, 1986). There were 18 academic high schools in this geographical area: 4 boys' schools, 7 girls' schools, and 7 coeducational schools. For sampling purposes, 5 schools were selected: 2 boys' schools, 2 girls' schools, and 1 coeducational school. These 5 schools were selected geographically and otherwise to best depict the total population within the 18 schools.

The students were from randomly selected English language classes at each of the three grade levels in each of the five Jamaican high schools participating in the study. The selection of students from English classes within each school allowed for the broadest cross-section of students, since students, at all grade levels, are required to take English language classes. The resultant sample consisted of 115 boys and 116 girls from the first form, 106 boys and 131 girls from the third form, and 103 boys and 92 girls from the fifth form. The combined sample from the five schools was 663 students. The proportion of the sample from each of the participating schools varied with the size of the school's total first, third, and fifth form population.

The average age of first form students was 12.2 years, of third form students the average age was 14 years, and the average age of fifth form students was 16.1 years.

Instruments

Career Maturity Inventory

The Crites' (1978a) Career Maturity Inventory Attitude Scale (CMI-Att) was used in this study to determine the maturity of career attitudes of first, third, and fifth form students in Jamaican academic high schools. The CMI was designed to measure the maturity of attitudes needed for realistic decision making (Hansen, 1974). It has been used to identify problems in career development, to assist counselors in determining the attitude and skills possessed by clients for making their own career decision, and to evaluate career guidance programs (Palmo & Lutz, 1983). It has been described by Crites (1978b) as both a diagnostic and an assessment tool.

The CMI, formerly the Vocational Development Inventory, has been termed the most widely used and most universally accepted measure of career maturity (Moore & McLean, 1977; Palmo & Lutz, 1983). It is based on the theory that vocational choice is a developmental process, progressing through successive, distinguishable periods (Ginzberg et al., 1951). Super (1955, 1957) added the concept of vocational maturity to Ginzberg's theory.

The Attitude Scale of the CMI consists of 50 self-descriptive statements, selected from an initial pool of 1,000 items and

classified by judges as differentiating among age and grade levels (Crites, 1961). Statements are designed to measure five dimensions of career maturity: involvement in the choice process, orientation to work, independence in decision making, preference for factors in career choice, and conceptions of vocational choice (Crites, 1973).

The instrument yields one score which is designed to give a measure of career maturity. Crites has combined aspects of an age scale and a point scale into a measurement model which constructs norms for age levels, rather than age quotients. Thus, an individual's career maturity is evaluated based on his or her peer group (Hansen, 1974). The scale is keyed true/false, a format which differentiated more effectively between age and grade groupings than a 5-point Likert scale (Hansen, 1974).

The readability level of the CMI is set at the sixth grade level. It is considered appropriate for the 6th through 12th grade population, but has been used with younger students and with college students (Palmo & Lutz, 1983). The CMI is untimed, but 20-30 minutes is suggested as a timing guideline (Hansen, 1974).

The CMI may be scored by hand or machine. Scores may be converted to T-scores or percentile ranks (Crites, 1978c). A score at the 50th percentile or above indicates that the respondent is progressing along with or ahead of others in the same grade. A respondent who scores below the 50th percentile is considered in need of career guidance

(Hansen, 1974). Groups making more appropriate vocational choices were found to have significantly higher scores on the CMI (Westbrook, 1976).

The standardization sample for the CMI Attitude Scale consisted of 74,000 students in American schools and was considered "somewhat representative" of the national population with regard to geographic region (Crites, 1978c, p. 29). Scores are reported for each grade level from the sixth grade and may be used for comparison purposes (Crites, 1978c). Users are encouraged to compile local norms, using the tables provided in the manual as a point of reference. This is a distinct advantage in test exportation, in view of Lonner's (1981) warning that "test norms based on one cultural group should not be considered valid for other cultural groups" (p. 282).

There was a 74% agreement of the judges with the standardization sample on scoring responses for the CMI (Hansen, 1974). The Attitude Scale of the CMI has been shown to be related to several criteria: realism of aspiration and attitude, consistency and realism in career choice, decisiveness in career choice (Bathory, Carek, & Hollender, cited in Crites, 1978b), and appropriateness of vocational choice (Westbrook, 1976).

The question has been raised that a significant proportion of the variance in CMI scores can be accounted for by intelligence and achievement variables. Westbrook (1976) found high correlations

between the CMI and intelligence. Palmo and Lutz (1983) also found significant correlations between verbal intelligence and CMI scales. This was, however, in a disadvantaged population. Other researchers (e.g., Ansell & Hansen, 1971; Herr & Enderlein, 1976) have supported Crites' (1965) concept of a general developmental progression. Chodzinski and Randhawa (1983) found partial support for the construct validity of the Attitude Scale of the CMI.

Additional findings in the validity study of Chodzinski and Randhawa (1983) isolated sex and grade level, but not socioeconomic status as significant predictors of career maturity. There was a tendency for females to score higher on career maturity; however, this was truer of the competence subtest which was not used in this study.

The KR 20 reliabilities for the CMI ranged from .65 to .84 with an average of .74 (Crites, 1978b). Test-retest reliability, after a one-year period, was .71 in the standardization sample of 1648 6th and 12th graders (Crites, 1974b). Hansen (1974) judged this to be sufficiently high to establish measurement of the variable, but low enough to allow for maturational variance.

Nowicki-Strickland Locus of Control Scale

The Nowicki-Strickland Locus of Control Scale for Children (Nowicki & Strickland, 1973) was used to determine internal/external locus of control orientation in the students participating in this study. The major measures of locus of control, Rotter I-E Scale

(1966) and Levenson's (1974) I/P/C Scale have been used primarily to measure this variable in adults. Nowicki and Strickland developed this scale to satisfy the need for a more reliable measure of locus of control in children than Bialer's (1961) measure and a more easily-administered scale than that of Battle and Rotter (1963). Gilmore (1978) described the Nowicki-Strickland Scale as "the most attractive choice for measurement of generalized locus of control" (p. 8).

The Nowicki-Strickland Scale is a paper-and-pencil measure consisting of 40 questions that are answered yes or no by placing a mark next to the question. This form of the measure derives from work which began with a large number of items (N=102), constructed on the basis of Rotter's definition of the internal-external control of reinforcement dimension. The items describe reinforcement situations across interpersonal and motivational areas such as affiliation, achievement, and dependency. (Nowicki & Strickland, 1973, p. 149)

A group of nine clinical psychologists serving as expert judges were given the 102 items and Rotter's description of the locus of control dimension and asked to answer the items in an external direction. This process eliminated all but 59 items on which the judges were in complete agreement. The scale was further reduced to 40 items as a result of item analysis which made for a more homogeneous scale.

To obtain demographic measures and reliability and construct validity information, the 40-item scale was then administered to a sample of 1,017 children ranging from the 3rd through the 12th grade. The results reported by Nowicki and Strickland (1973) are summarized as follows:

1. The authors tentatively concluded that internality is positively related to higher socioeconomic level, especially for males.

2. A clear, inverse relationship emerged between achievement and locus of control scores, with a stronger negative relationship in the male groups. The achievement of females did not seem predictable from scores on the NS-IE, except for a trend in the 5th and 7th grades.

3. Internal consistency, determined by the split-half method, corrected by the Spearman-Brown formula, ranged from $r=.63$ for lower grades to $r=.81$ for the 12th grade. These reliabilities were considered satisfactory by the authors because the items are not arranged in order of difficulty.

4. Test-retest reliabilities, six weeks apart, were $.63$ for 3rd grade, $.66$ for 7th grade, and $.71$ for 10th grade.

Construct validity was investigated further by examining the relationship of the NS-IE scale to Bialer's (1961) Intellectual Achievement Responsibility Scale. Correlations between the two measures were significant but low, as expected. Higher levels of significance were found when the NS-IE Adult Scale was compared with the Rotter I-E Scale ($N=76$, $r=.61$, $p < .01$; $N=46$, $r=.38$, $p < .01$). The NS-IE Adult Scale is similar to the NS-IE Children's Scale, except for the change of "kids" to "people" and the rephrasing of items referring to parents. Rotter's I-E Scale is the first theoretically

based measurement of locus of control against which all other measures are compared. The goal of the authors was to "make the items readable at the fifth grade level, yet appropriate for older children" (Nowicki & Strickland, 1973, p. 149).

Administration time is about 15-20 minutes. Respondents circle each answer "yes" or "no" according to his or her beliefs. An individual's score is the total of the number of items endorsed in the same way as the key (i.e., the external items). The resulting total is the individual's I-E score. Scores are grouped from low to high for a group. The median defines the hypothetical cut-off between internals and externals. The higher the score, the more external the person (Nowicki & Duke, 1974).

For purposes of cross-cultural comparison, means and standard deviations are available for males and females from grades 3 through 12 (Nowicki & Strickland, 1973).

Socioeconomic Status

Miller's (1971) Occupational Coding Scheme was used by this investigator as a measure of socioeconomic status (SES) in the student population studied. According to this scale, parental occupations are keyed into six groups: (a) higher professional and managerial, (b) lower professional and managerial, (c) highly skilled, (d) skilled, (e) semi-skilled, and (f) unskilled. Miller (1971) has categorized group (a) as the upper class, groups (b) and (c) as the traditional

middle class, group (d) as the emerging middle class, and groups (e) and (f) as the lower class. These groups were further subdivided into three categories for the purposes of this research: upper, groups (a) and (b); middle, group (c); and lower, groups (d), (e), and (f).

Researchers in Jamaican society have typically used occupational coding schemes, such as Miller's to determine SES (Leo-Rhynie & Hamilton, 1982). Leo-Rhynie and Hamilton (1982) have developed a more comprehensive measure of SES called a Life Style Scale. It exists in a long form comprised of 44 items or a short form with 23 items. The forms have correlation coefficients of .64 ($p < .01$) and .61 ($p < .01$), respectively, with the Miller Scale. They are, however, still research instruments at this point in time.

Research Procedures and Data Analysis

The data gathering stage of the study included the researcher and English language teachers and/or counselors of the classes selected. The researcher met with the principal or the school counselor in each of the five schools to explain the purpose of the study and to schedule administration of the instruments. The researcher subsequently administered both instruments to 21 classes: 7 classes at each of the preselected form levels. Information on parental occupation was collected by means of a demographic questionnaire completed by the students at the time of administration of the

instruments. Two class periods (of 35 minutes each) were needed for completion of the instruments and the demographic questionnaire.

The means and standard deviations were computed on the CMI and the NS-IE scales for students at each of the three levels (i.e., first, third, and fifth form). The .01 level of significance was used for the analyses of variance and for the t tests.

In order to test hypotheses one and two, a one-way analysis of variance was used to determine if the Jamaican high school students in this study differed significantly by grade level on mean scores of the career maturity and locus of control orientation measures.

To test hypotheses three and four, a series of t tests was used to determine whether significant differences existed on mean scores on career maturity and locus of control orientation for Jamaican and American students at comparable ages. Scores reported by Crites (1978c) were used for the American students' career maturity levels. Scores provided by Nowicki & Strickland's (1973) experimental sample were used for the locus of control measures of American students.

To test hypotheses five through seven, a series of two-way ANOVAs was computed to test for the interactions of grade level and locus of control, grade level and socioeconomic status, grade level and gender, respectively, on the career maturity of the subjects.

To test hypotheses eight and nine, two-way ANOVAs were computed to test for the interactions of grade level and socioeconomic status, and grade level and gender on locus of control.

CHAPTER IV RESULTS OF THE STUDY

This study was designed to investigate the associations of gender, socioeconomic status, locus of control, and career maturity of Jamaican high school students at three grade levels (i.e., the beginning, mid-point, and the terminal year in high school). In order to explore the developmental process of career maturity and locus of control orientation in Jamaican students from a global perspective, the researcher compared the mean scores of Jamaican students in the study and the normative scores of American students. The scores used in these comparisons were those established by Crites (1978c) for the Career Maturity Inventory Attitude Scale (CMI) and by Nowicki and Strickland (1973) for the Locus of Control Scale for Children (NS-IE). These scales were used to measure career maturity and locus of control orientation, respectively, in Jamaican high school students.

In this chapter, the composition of the resultant sample and the results of the analyses performed for each null hypothesis are presented. The data were analyzed using the SPSS X statistical program. The techniques used were analysis of variance and t tests with the alpha level set at .01.

The Jamaican sample was selected from 5 of the 18 academic high schools in the Kingston and St. Andrew corporate area. Of the 5 schools, 2 were girls' schools, 2 were boys' schools, and 1 was coeducational. A random sample of English language classes was selected within each school at the first, third, and fifth form level. According to Downie and Starry (1977), this cluster sampling procedure increases the possibility of sampling error. For this reason, the more stringent .01 level of significance was used for all analyses.

Demographic Data of Sample

The resultant sample consisted of 663 Jamaican high school students with subsamples of 231 students in the first form, 237 in the third form, and 195 in the fifth form. The details of the composition of the sample are reported in Tables 1 and 2.

Table 1

Composition of Jamaican Sample Groups by Form and Gender

Form	Average Age	Male	Female	Total
1	12.2 years	115	116	231
3	14.0 years	106	131	237
5	16.1 years	103	92	195
Total		324	339	663

Table 2

Composition of Jamaican Sample Groups by Gender and Socioeconomic Status

Form		Upper SES	Middle SES	Low SES
1	Boys	28.7%	40.9%	30.4%
	Girls	41.4%	30.2%	28.4%
3	Boys	46.2%	34.9%	18.9%
	Girls	38.9%	40.5%	20.6%
5	Boys	44.7%	35.9%	19.4%
	Girls	50.0%	27.2%	22.8%

The means and standard deviations were computed on the CMI and the NS-IE for students at each of the three levels: first, third, and fifth form. The sample size, means, and standard deviations for each criterion variable used in the study are presented in Tables 3 and 4. Scores on each of these scales are normally distributed for the Jamaican sample.

Inspection of the descriptive data on the CMI scores for Jamaican high school students suggested that

1. female students, as a group, scored higher than males;
2. scores increased with the number of years in high school;
3. membership in the highest socioeconomic group was associated with the highest CMI score, and vice versa; and

4. students classified as internal on the locus of control orientation scale scored higher than students classified as external. (See data in Table 3.)

Table 3

Summary of Sample Means and Standard Deviations on the CMI

Independent Variable	N	Dependent Variable	Sample Means	Standard Deviations
Gender				
Male	324	CMI	29.71	5.49
Female	339		30.15	4.86
Form				
First	231	CMI	28.07	5.01
Third	237		30.02	5.09
Fifth	195		32.04	4.65
SES				
High	273	CMI	31.13	5.21
Middle	234		29.48	5.07
Low	156		28.51	4.84
Locus of Control				
Internal	335	CMI	31.17	4.95
External	328		28.67	5.11

Table 4

Summary of Sample Means and Standard Deviations on the
NS-IE Scale

Independent Variable	N	Dependent Variable	Sample Means	Standard Deviations
Gender				
Male	324	NS-IE	12.57	5.49
Female	339		13.75	4.64
Form				
First	231	NS-IE	14.40	4.32
Third	237		13.25	4.36
Fifth	195		11.62	4.51
SES				
High	273	NS-IE	12.36	4.36
Middle	234		13.36	4.52
Low	156		14.31	4.61

Inspection of the descriptive data on the NS-IE scale for Jamaican high school students suggested that

1. male students, as a group, scored more in the internal direction than females;
2. internality increased with the number of years in school; and

3. membership in the highest socioeconomic group was associated with internality, membership in the lowest socioeconomic group was associated with externality. (See data in Table 4.)

Results of Testing the Null Hypotheses

Several null hypotheses were tested. The analysis of the data generated and the results of the testing of the null hypotheses are presented below.

A one-way analysis of variance statistic was used to test the first hypothesis:

Ho 1: There is no significant difference in the level of career maturity among first, third, and fifth form students in Jamaican high schools.

The results indicated that career maturity does increase incrementally with grade level for Jamaican high school students. Visual evidence of this increase is presented in Figure 1. The details of the ANOVA data are reported in Table 5.

The data were further submitted to the Tukey procedure, using the studentized range statistic, q , for evaluating differences among pairs of means (Bartz, 1981). The critical values for q at the .05 and .01 levels of significance are 3.31 and 4.12, respectively, for three means with 660 degrees of freedom. The results of these analyses are presented in Table 6. These data indicated that the mean scores on the CMI of the first and the third form students, the first and the

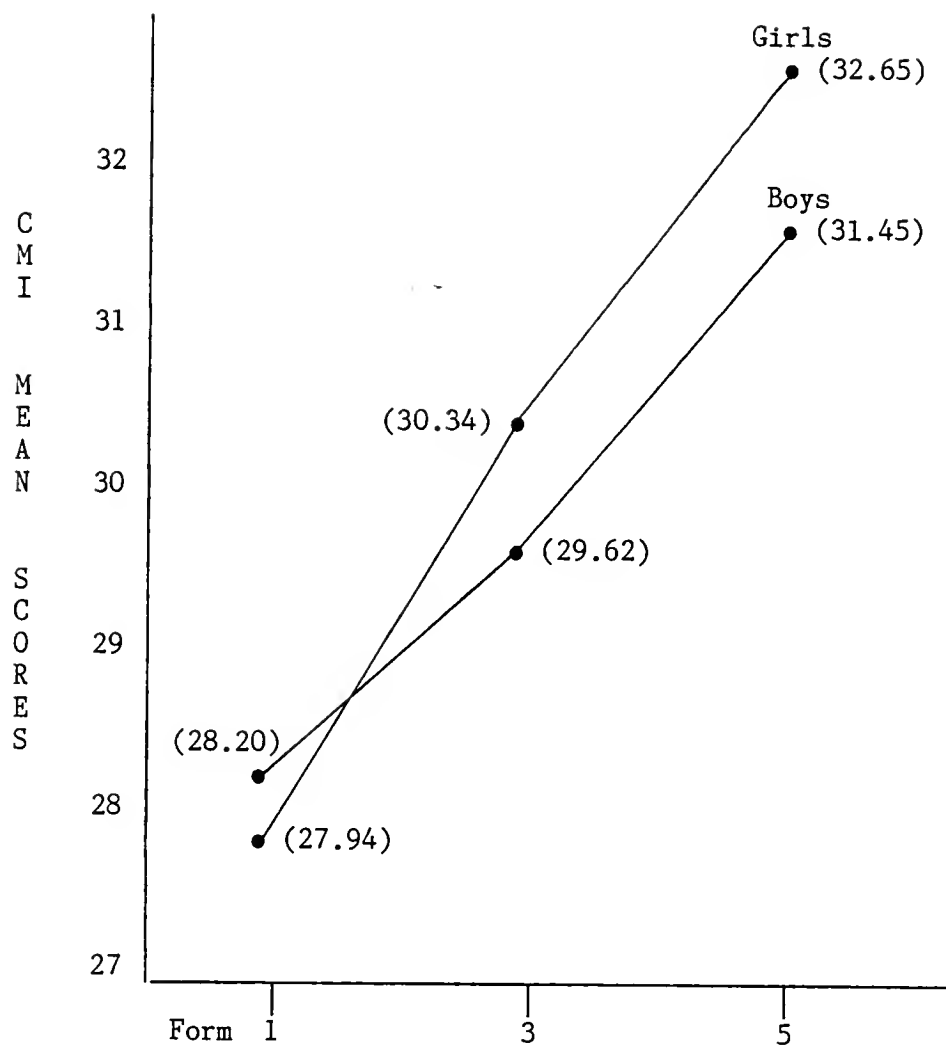


Figure 1. CMI mean scores by gender and form level.

Table 5

Analysis of Variance: The Effects of Form Level on
Career Maturity Scores

Source	Degrees of Freedom	Sum of Squares	F
Between Groups	2	1670.5839	34.30 *
Within Groups	660	16072.4961	
Total	662	17743.0799	

* $p < .00$

Table 6

Results of Tukey's Procedure for Testing Differences
Between Means on the CMI for Three Forms

Forms	q	Significance
Forms 1 and 3	q = 6.04	Significant, $p < .01$
Forms 3 and 5	q = 5.99	Significant, $p < .01$
Forms 1 and 5	q = 11.79	Significant, $p < .01$

fifth form students, and the third and the fifth form students differed significantly ($p < .01$). Based upon the previously described null hypothesis rejection criterion, this null hypothesis was rejected.

The second null hypothesis tested in this study was as follows:

Ho 2: There is no significant difference in locus of control orientation among first, third, and fifth form students in Jamaican high schools.

This hypothesis was tested using the one-way analysis of variance statistic with the alpha level set at .01. The results indicated that locus of control orientation moves from the external to the internal from the youngest to the oldest students in the study. Visual representation of this change is charted in Figure 2. The details of the ANOVA are displayed in Table 7. It can be seen that there were significant differences among the three groups ($F = 21.24$, $p < .01$), so the null hypothesis was rejected.

The data were further submitted to the Tukey procedure, using the studentized range statistic, q , for evaluating differences among pairs of means (Bartz, 1981). The results of this analysis are presented in Table 8. These results revealed that the mean scores of Jamaican students on the NS-IE in the first and third forms were significantly different at the .05, but not at the .01 level of significance. However, the mean scores of Jamaican students in the first and fifth forms and those in the third and fifth forms were significantly different at the .01 level.

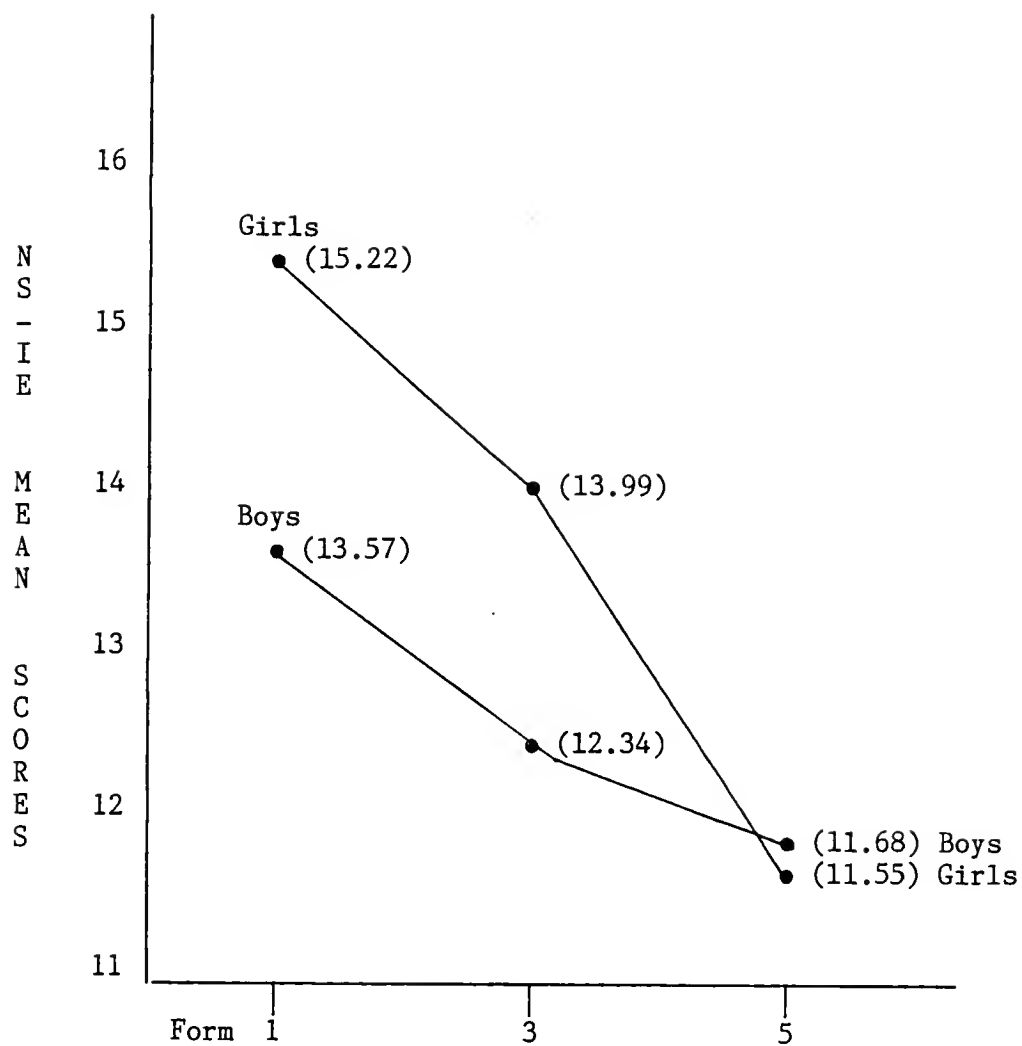


Figure 2. Mean scores on NS-IE by gender and form level.

Table 7

Analysis of Variance: The Effects of Form Level on
Locus of Control Orientation

Source	Degrees of Freedom	Sum of Squares	F
Between Groups	2	820.6096	21.24 *
Within Groups	660	12751.7886	
Total	662	13572.3982	

*p < .00

Table 8

Results of Tukey's Procedure for Testing Differences
Between Mean Scores on the NS-IE for Three Forms

Forms	q	Significance
Forms 1 and 3	q = 4.01	Significant, p < .05
Forms 3 and 5	q = 5.41	Significant, p < .01
Forms 1 and 5	q = 9.68	Significant, p < .01

The third null hypothesis tested in this study was as follows:

Ho 3: There is no significant difference in the level of career maturity of first, third, and fifth form students in Jamaican high schools and students of similar ages in an American sample.

This hypothesis was tested by a series of t tests which were used to compare the mean scores of American students at the sixth, eighth, and tenth grade level with the mean scores of Jamaican students in the first, third, and fifth forms, respectively, on the CMI. The significance of t was set at the .01 level. The null hypothesis may be rejected if $t > 2.576$. The details of these analyses are reported in Table 9. Visual evidence of these differences is presented in Figure 3.

Table 9

Mean Differences on the CMI: American and Jamaican Students

American Students				Jamaican Students				t
Grade	Mean	SD	N	Form	Mean	SD	N	
6	29.08	5.82	2457	1	28.07	5.01	231	2.55 *
8	31.31	5.72	11971	3	30.02	5.09	237	3.45 **
10	32.75	5.38	8249	5	32.04	4.65	195	1.75

* $p < .05$

** $p < .01$

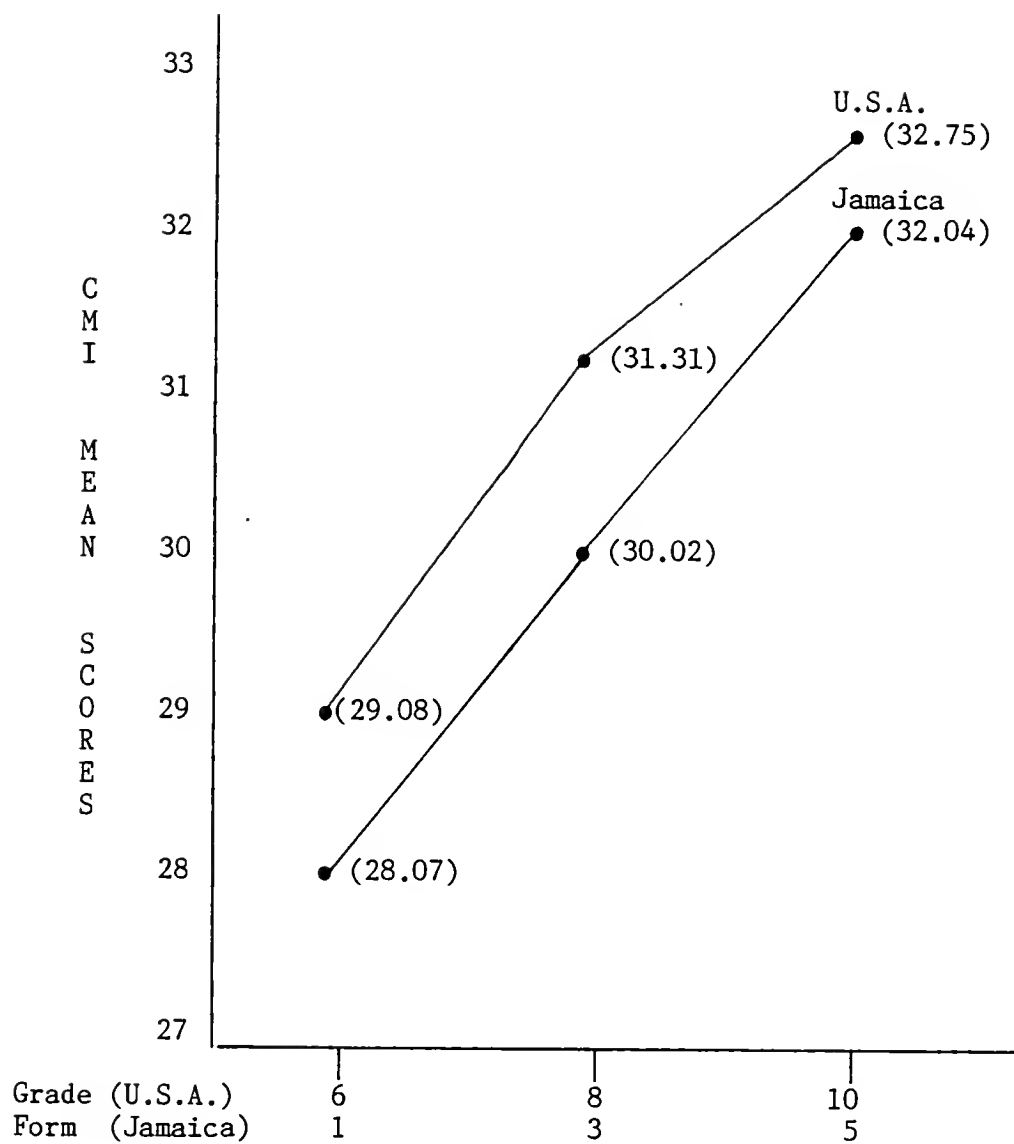


Figure 3. CMI mean scores by country and grade/form level.

There was a significant difference in mean scores of American students at the eighth grade level and Jamaican students at the third form level on the CMI ($t = 3.45$, $p < .01$). The difference between the scores of American students at the sixth grade level and Jamaican students at the first form level was significant at the .05 level, but not at the more stringent .01 level ($t = 2.55$, $p > .01$). The difference between mean scores of American students at the tenth grade level and Jamaican students in the fifth form was not significant ($t = 1.75$, $p > .01$).

There was only partial support for the null hypothesis. The null hypothesis was retained for comparisons of the first form/sixth grade level and fifth form/tenth grade level. However, the hypothesis was rejected for the comparison at the third form/eighth grade level.

The fourth null hypothesis tested in this study was as follows:

Ho 4: There is no significant difference in locus of control orientation of first, third, and fifth form students in Jamaican high schools and students of similar ages in an American sample.

This hypothesis was tested by a series of t tests were used to compare the mean scores of American students (males and females) at the sixth, eighth, and tenth grade level with the mean scores of Jamaican students in the first, third, and fifth forms. The significance of t was set at the .01 level. The null hypothesis may be rejected if $t > 2.576$. The means and standard deviations of scores

on the NS-IE for American and Jamaican males and females at the equivalent age levels are reported in Table 10. Visual evidence of these differences are presented in Figures 4 and 5.

Table 10

Mean Differences on the NS-IE: American and Jamaican Male and Female Students

American Males				Jamaican Males				<u>t</u>
Grade	Mean	SD	N	Form	Mean	SD	N	
6	13.73	5.16	45	1	13.57	4.28	115	.19
8	14.73	4.35	75	3	12.34	4.12	106	3.74**
10	13.05	5.34	68	5	11.68	4.42	103	1.81

American Females				Jamaican Females				<u>t</u>
Grade	Mean	SD	N	Form	Mean	SD	N	
6	13.32	4.58	43	1	15.52	4.23	116	2.45 *
8	12.29	3.58	34	3	13.99	4.43	131	2.05 *
10	12.98	5.31	57	5	11.55	4.65	92	1.71

* $p < .05$

** $p < .01$

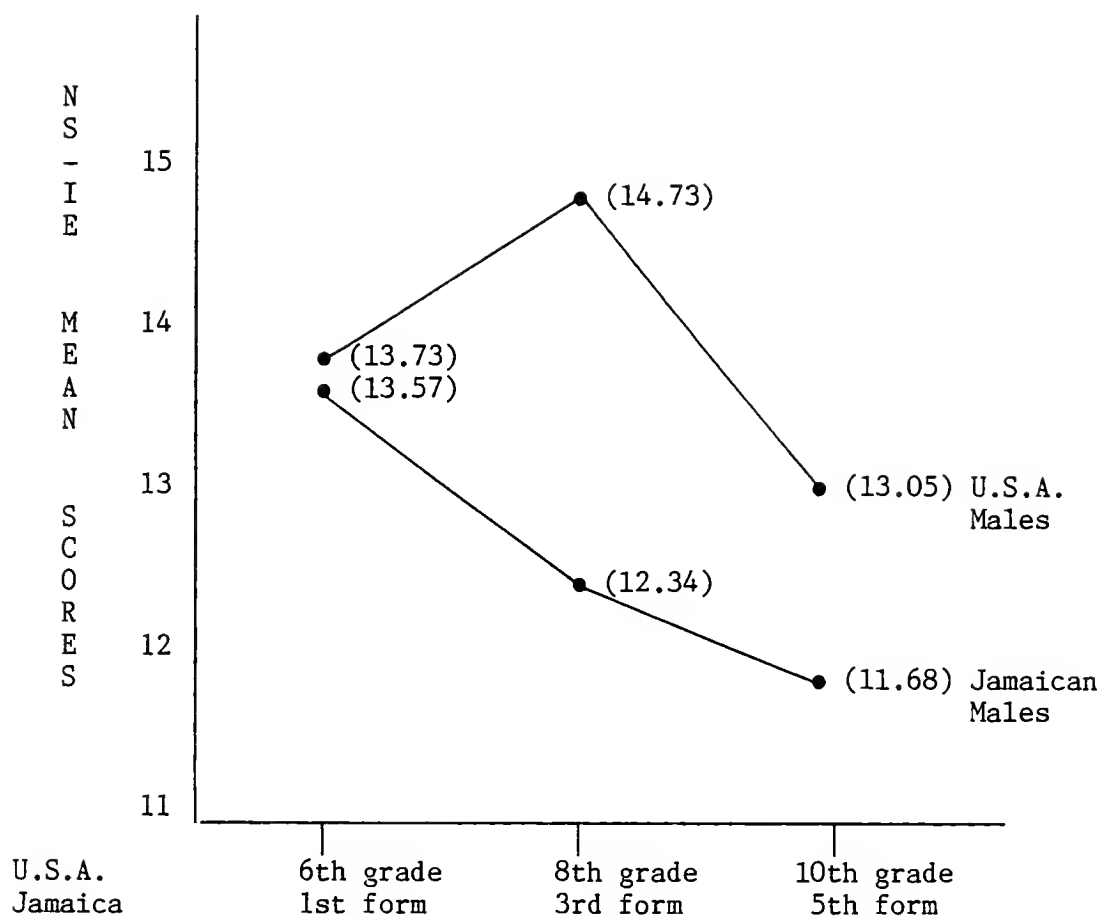


Figure 4. NS-IE mean scores for American and Jamaican students (males).

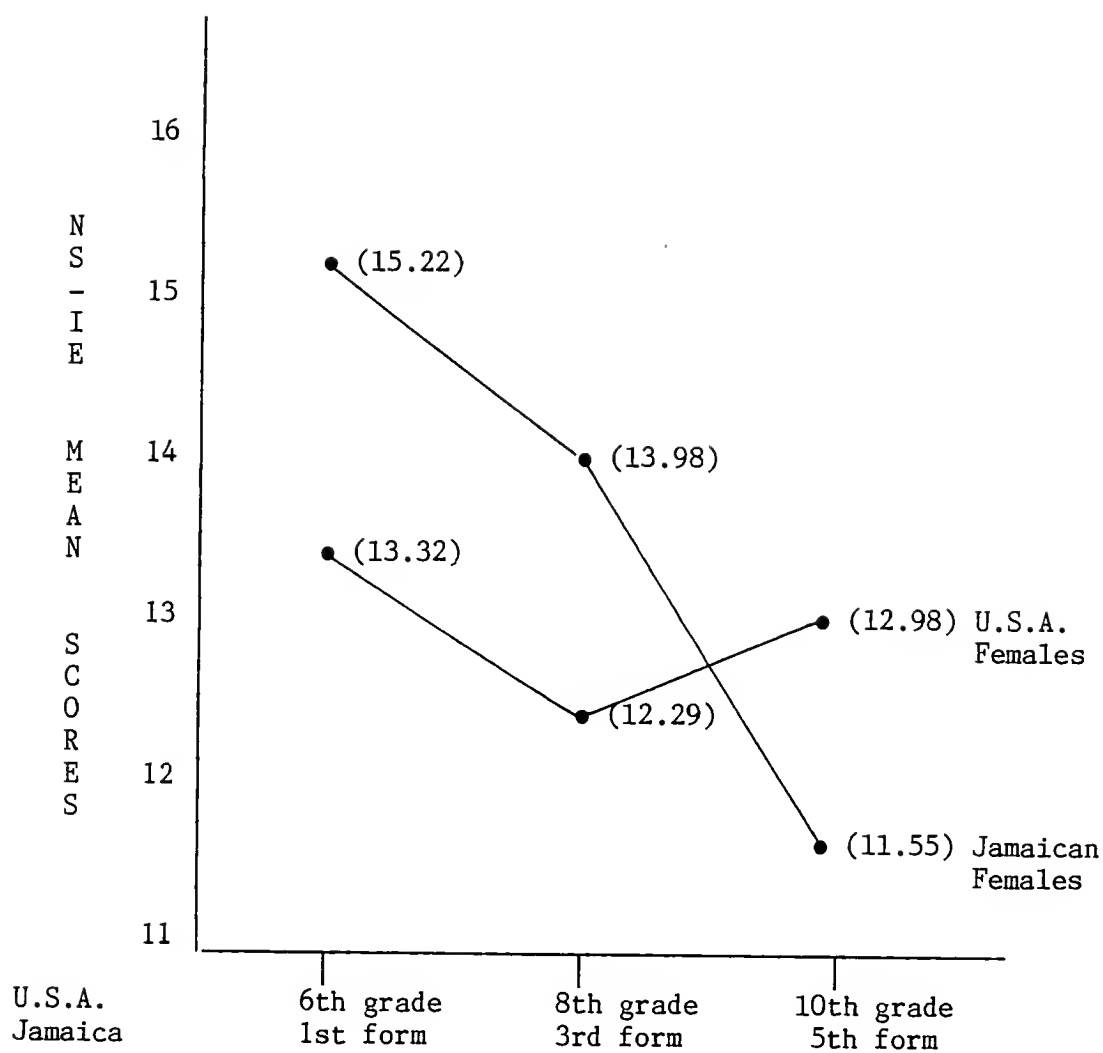


Figure 5. NS-IE mean scores for American and Jamaican students (females).

Male students in the Jamaican sample scored consistently lower than males in the American sample, suggesting a greater degree of internality among Jamaican males on the NS-IE Scale. On the other hand, females in the Jamaican sample, except at the fifth form level, scored higher than females in the American sample, indicating a greater degree of externality in the Jamaican females.

The difference on mean scores on the NS-IE was significant at the .01 level for American and Jamaican male students at the eighth grade/third form level ($t = 3.74$, $p < .01$). Differences between the scores of American and Jamaican female students at the sixth grade/first form level and the eighth grade/third form level were significant at the .05 level, but not at the more stringent .01 level ($t = 2.45$, $p > .01$; $t = 2.05$, $p > .01$), respectively. The difference between the mean scores of males in both American and Jamaican samples at the sixth grade/first form and the tenth grade/fifth form level was not significant ($t = 1.71$, $p > .05$). The difference between mean scores of American females at the tenth grade level and Jamaican females at the fifth form level was not significant ($t = 1.71$, $p > .01$).

There was very strong support for the null hypothesis since only one of six comparisons was statistically significant. The null hypothesis was retained for all comparisons except that of third form/eighth grade males.

A 2 x 3 analysis of variance was computed to test hypothesis five which stated:

Ho 5: There is no difference in career maturity as a function of locus of control orientation classification in Jamaican high school students in the first, third, and fifth forms.

The analysis revealed significant main effects for form level ($F(2,657) = 35.53, p < .01$) and for locus of control orientation ($F(1,657) = 42.20, p < .01$). Thus, the null hypothesis was rejected. The interaction between the two variables was not significant ($F(2,657) = .56$). The details of this analysis are shown in the ANOVA summary table in Table 11. A visual representation of the differences is presented in Figure 6.

The sixth null hypothesis tested in this study was as follows:

Ho 6: There is no significant difference in career maturity as a function of socioeconomic status in Jamaican high school students in the first, third, and fifth forms.

There were three levels of socioeconomic status (SES), i.e., upper, middle, and lower. A 3 x 3 ANOVA was computed to test this hypothesis. There were significant main effects for form level ($F(2,654) = 30.54, p < .01$) and for SES ($F(2,654) = 10.79, p < .01$), resulting in the rejection of the null hypothesis. The interaction effect of SES x form level was not significant ($F(4,654) = 1.07$). The results of this analysis are presented in Table 11. A visual representation of these results is displayed in Figure 7.

Table 11

Analysis of Variance Summary Table for CMI Data

Source	SS	df	MS	F	Sig. of F
W/in Cells	15056.36	657	22.92		
Constant	593168.10	1	593168.10	25883.51	.000
Form	1628.51	2	814.25	35.53	.000
IE	967.03	1	967.03	42.20	.000
Form x IE	25.63	2	12.81	.56	.572
W/in Cells	15431.06	654	23.59		
Constant	543989.86	1	543989.86	23055.41	.000
Form	1441.13	2	720.56	30.54	.000
SES	509.48	2	254.74	10.79	.000
Form x SES	100.81	4	25.20	1.07	.371
W/in Cells	15973.72	657	24.31		
Constant	591105.17	1	591105.17	24312.18	.000
Form	1693.09	2	846.55	34.82	.000
Gender	47.16	1	47.16	1.94	.164
Form x Gender	57.02	2	28.51	1.17	.310

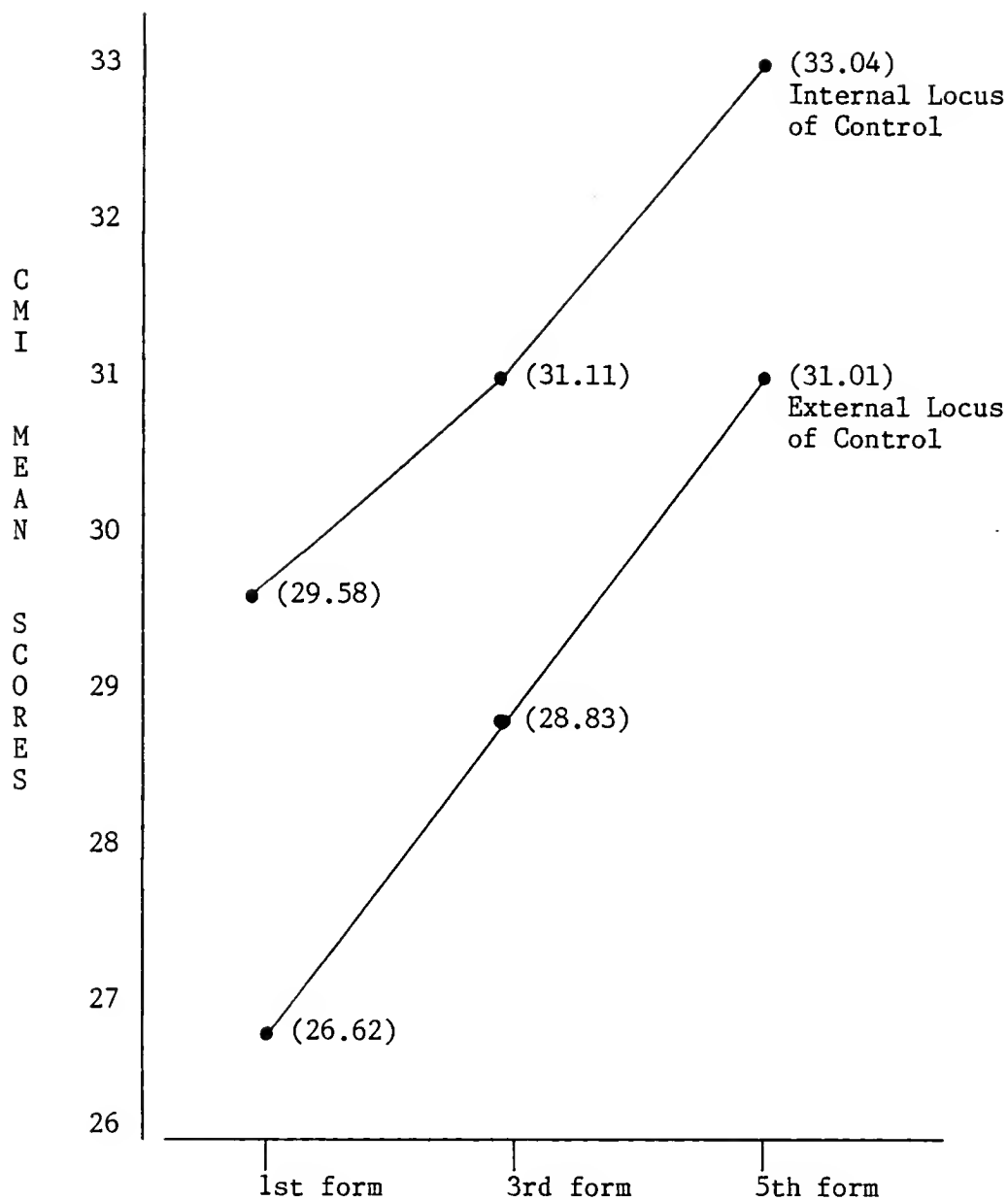


Figure 6. CMI mean scores by form level and locus of control orientation.

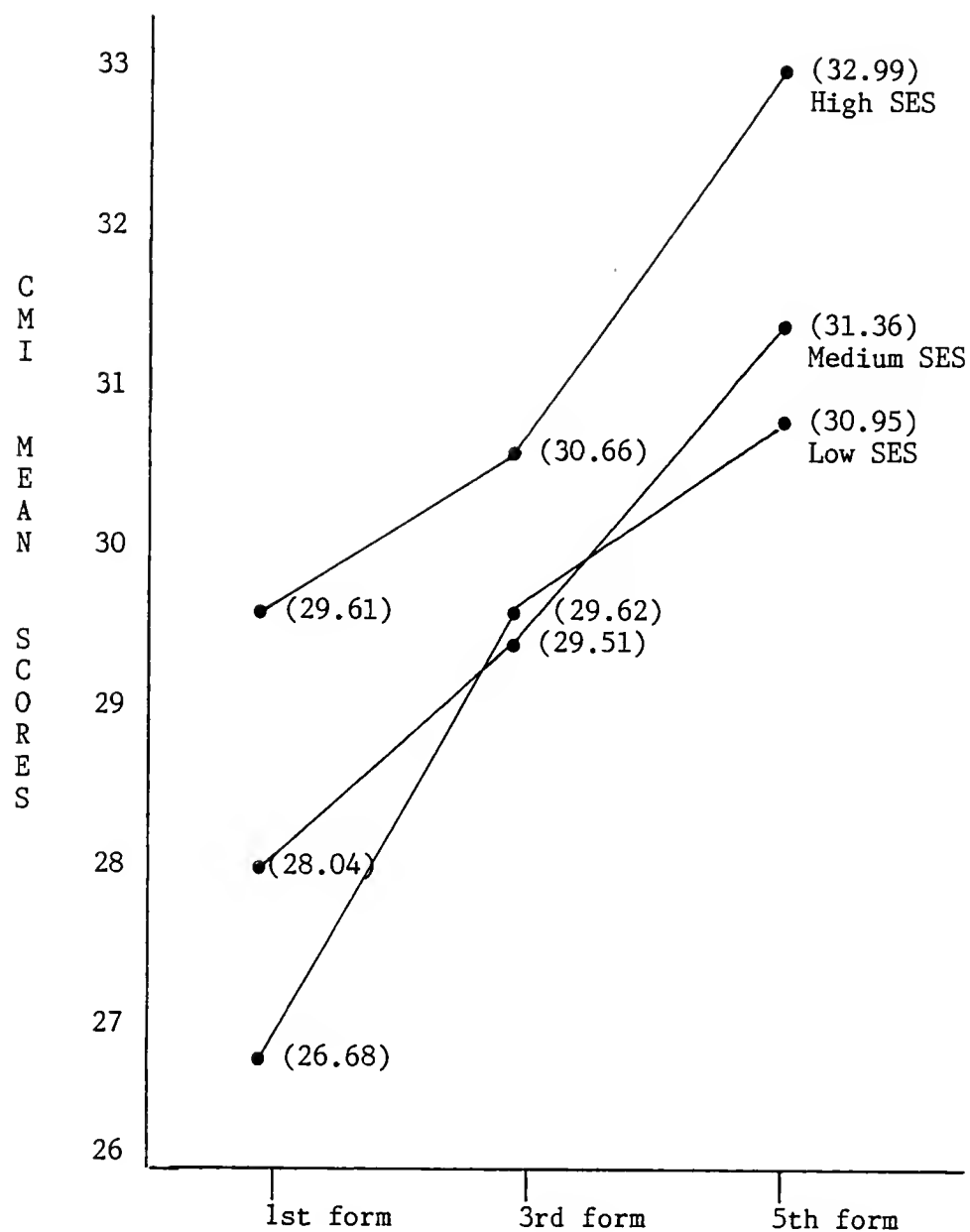


Figure 7. CMI mean scores by SES and form level.

The seventh null hypothesis tested in this study was as follows:

Ho 7: There is no significant difference in career maturity as a function of gender in Jamaican high school students in the first, third, and fifth forms.

A 2 x 3 ANOVA was computed to test this hypothesis. There was a significant main effect for form level ($F(2,657) = 34.82, p < .01$), but the main effect of gender ($F(1,657) = 1.94$) and the interaction effect of form level x gender were not significant ($F(2,657) = .31$). There was only partial support for this hypothesis. The results of this analysis are presented in Table 11. These results are displayed in Figure 8.

The eighth null hypothesis tested in this study was as follows:

Ho 8: There is no significant difference in locus of control orientation as a function of socioeconomic status (SES) in Jamaican high school students in the first, third, and fifth forms.

The main effects of form level ($F(2,654) = 17.93, p < .01$) and SES ($F(2,654) = 7.33, p < .01$) were significant. Therefore, the null hypothesis was rejected. The interaction effect of form level x SES was not significant ($F(3,654) = .11$). The results of this analysis are presented in Table 12.

The ninth null hypothesis tested in this study was as follows:

Ho 9: There is no significant difference in locus of control orientation as a function of gender in Jamaican high school students in the first, third, and fifth forms.

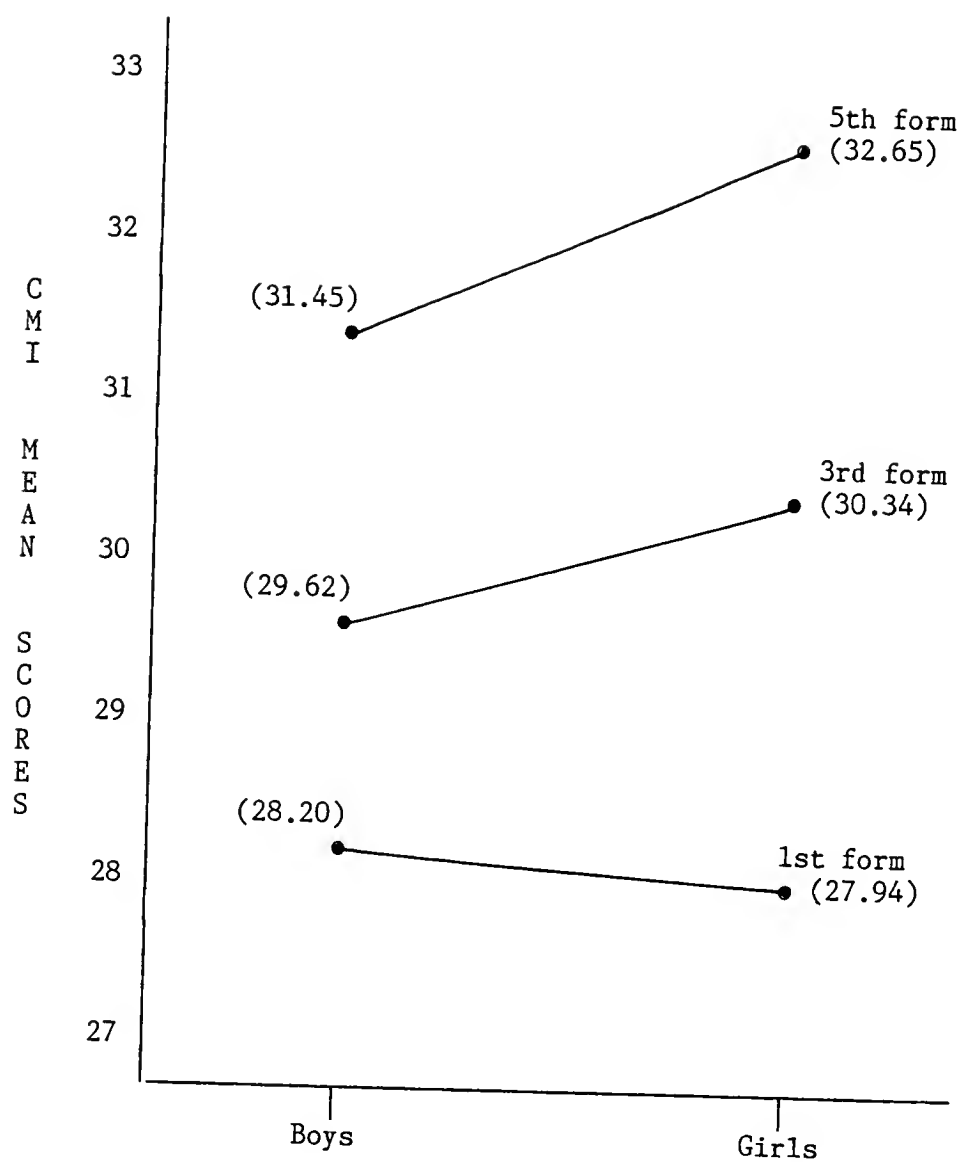


Figure 8. CMI mean scores by gender and form level.

Table 12

Analysis of Variance Summary Table for NS-IE Data

Source	SS	df	MS	F	Sig. of F
W/in Cells	12456.75	654	19.04		
Constant	106854.68	1	106854.68	5610.05	.000
Form	682.86	2	341.43	17.93	.000
SES	279.50	2	139.75	7.33	.001
Form x SES	8.11	4	2.03	.11	.980
W/in Cells	12435.19	657	18.92		
Constant	111708.06	1	111708.06	5901.97	.000
Form	817.16	2	408.58	21.59	.000
Gender	182.84	1	182.84	9.66	.002
Form x Gender	107.74	2	53.87	2.85	.059

The main effects of form level ($F(2,657) = 21.59$, $p < .01$) and gender ($F(1,657) = 9.66$, $p < .01$) were significant. Therefore, the null hypothesis was rejected. The interaction effect of form level x gender was not significant ($F(2,657) = 2.85$). The results of this analysis are presented in Table 12. These results are visually displayed in Figure 9.

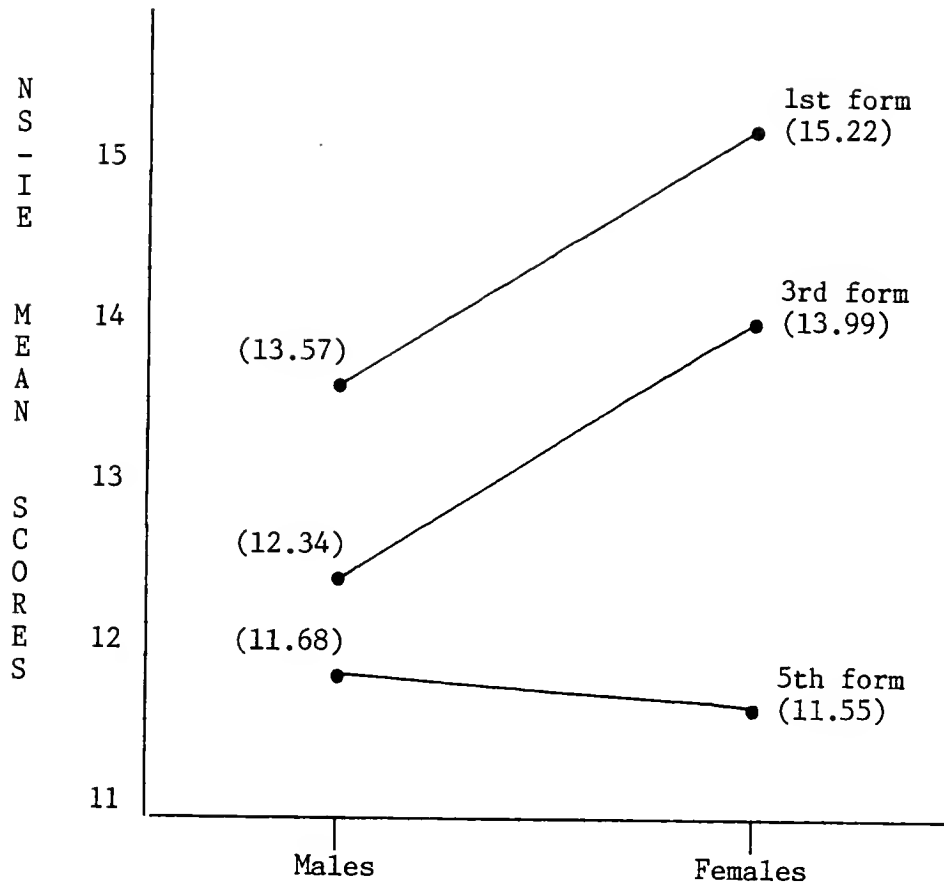


Figure 9. Locus of control scores by gender and form level.

Summary

The career maturity of the sample of Jamaican high school students in this study reveals the systematic pattern of increase by age. This appears to validate for this population Crites' (1973) developmental concept of career attitude maturing with educational growth. In addition to age and educational growth, locus of control orientation and socioeconomic status emerged as significant influences on career maturity in Jamaican high school students. An internal locus of control orientation and membership in a higher socioeconomic group were predictive of a more mature career attitude.

Whereas the pattern of career maturation of Jamaican high school students was not affected by gender, this was not the case with the development of locus of control. Female students in the sample were more external than males in the first form; however, as a group, they made greater strides toward internality between the first and the fifth form. By the fifth form there was no difference in locus of control orientation of males and females in the Jamaican sample.

Comparisons of Jamaican high school students and American students of equivalent ages revealed some differences in both career maturity and locus of control orientation in the two younger age groups studied. However, these differences had leveled off when Jamaican students in their fifth year in high school were compared with an age equivalent American sample.

CHAPTER V
SUMMARY, LIMITATIONS, CONCLUSIONS,
DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

Summary

The focus of this study was the associations of career maturity, locus of control, gender, form level (i.e., grade in school), and socioeconomic status among Jamaican high school students in the Kingston and St. Andrew corporate area. Previous researchers have suggested that career immaturity and an external locus of control may be factors contributing to inflated occupational aspirations in Jamaica's high school students, independent of their actual performance (Jackson, 1974; Strudwick, 1985).

The population for this study was a randomly drawn sample of intact English language classes from five academic high schools in Jamaica: two girls' schools, two boys' schools, and one coeducational school. There was a total sample of 663 students: 231 from the first form, 237 from the third form, and 195 from the fifth form. There were 324 male and 339 female students in the study. The average ages of the students were as follows: 12.2 years (first form), 14 years (third form), and 16.1 years (fifth form).

The Attitude Scale of Crites' (1978a) Career Maturity Inventory (CMI) and the Nowicki and Strickland (1973) Locus of Control Scale for

Children (NS-IE) were used to measure career maturity and locus of control orientation, respectively. Demographic information on age, form in school, gender, and parental occupation was collected.

The students were subdivided into three socioeconomic levels: upper, middle, and lower, according to parental occupation. Students were defined as internal or external, based on the median locus of control score.

Several null hypotheses were tested to determine the associations of the selected variables. Analyses of variance were used to determine if Jamaican high school students differed by form level, gender, and socioeconomic status on mean scores on career attitude maturity and locus of control orientation. The level of significance for the ANOVAs was set at .01. In addition, the career maturity and locus of control orientation of Jamaican high school students and American students of equivalent age groups were compared. A series of t tests was used in these comparisons, with the alpha level set at .01.

The hypothesis of no significant difference due to form level was rejected at the .01 level of confidence for both the Attitude Scale and the Locus of Control Scale.

The results of the comparisons of Jamaican high school students with American students were mixed. While some differences in career maturity were revealed for the two younger age groups compared, these

differences had apparently leveled off for the oldest group (tenth grade/fifth form) compared.

Jamaican high school males were more internally oriented than American males in the comparison sample; the reverse was true of Jamaican high school females. As a group, Jamaican females at the fifth form level displayed levels of internality equal to that of the Jamaican males and to both males and females in the American sample.

Significant main effects were revealed on scores on the CMI for form level, locus of control orientation, and socioeconomic status at the .01 alpha level. However, the main effect of gender was not significant. None of the interaction effects proved to be significant.

In the case of locus of control orientation, the main effects of form level, socioeconomic status, and gender were significant at the .01 level of significance. The interaction effects of these variables were not significant.

Limitations

This study was subject to certain limitations with the first being geographical. That is, the schools were selected exclusively from the corporate area of Kingston and St. Andrew, Jamaica. However, approximately 50% of all Jamaican high school students resided in this metropolitan area. In addition, the sample was not representative of Jamaican adolescents in the age groups selected, but of the 10% of

that age group enrolled in academic high schools (Statistical Yearbook of Jamaica, 1982). This somewhat homogeneous subject population reduced the variability that could be produced by sampling the entire population. This also means that the results of this study may not generalize to Jamaica's technical and vocational schools, which are relatively new institutions with a different history and less stringent criteria for admission. The results more readily generalize to other academic high schools in the Anglophone West Indies where there were commonalities in educational, social, and political history (Cross, 1979).

There is no solid evidence as to how culture appropriate the instruments used in this study are for Jamaican high school students. However, the constructs measured by both instruments have been found to differentiate among types of high school and college students in several very diverse cross-cultural populations. The locus of control construct has been satisfactorily measured in the following populations: Japanese (Bond & Tormatzky, 1973), Mexican American (Garza & Ames, 1974), Mexican (Medinnus, Ford, & Tack-Robinson, 1983), and Asian and West Indian adolescents in Britain (Louden, 1978). The CMI has been used with Nigerians (Achebe, 1975; Ifenwanta, 1978), Arab students (Moracco, 1976), and Chinese students (Huang, 1974). The applicability of these instruments seems to be sufficiently universal to justify their use in this study.

Conclusions

On the basis of the analyses performed, the researcher concluded that career maturity increased significantly with educational maturity in the Jamaican students studied. It was also concluded that locus of control in this population moved from an external to an internal dimension with increasing age.

American students in the sixth and eighth grades tended to score higher on the CMI than Jamaican students of equivalent ages in the first and third forms. However, the differences which seemed to exist in these early years had leveled off by the realistic stage of career development when Jamaican students in the fifth form were compared with American students at the tenth grade level.

As a group, Jamaican males in the study were more internal than American males in the comparison sample; the reverse was true of Jamaican females, except at the fifth form level. Thus, gender seems to be a greater predictor of locus of control in the Jamaican sample than in Nowicki and Strickland's (1973) experimental group. Also, by the fifth form, Jamaican females have become more similar to the age equivalent American experimental sample and to the Jamaican males in projecting a more internal locus of control.

Higher levels of career maturity were associated with an internal locus of control and a higher socioeconomic level at each of the three form levels. Socioeconomic status, as well as gender, accounted for

differences in locus of control orientation. Males were more internal than females except at the fifth form level; internality was related to membership in a higher socioeconomic group.

Discussion

The career maturity of the sample of Jamaican high school students in this study reveals a systematic pattern of increase by age. This finding seems to validate for this group Crites' (1973) developmental concept of career attitude maturing with educational growth. Therefore, Super's (1957) developmental theory of career maturity seems applicable to the Jamaican high school population. In addition, the Attitude Scale of Crites' Career Maturity Inventory appears to be a useful instrument for differentiation between the career mature and the career immature in the Jamaican context.

However, age and educational maturity were clearly not the only influences on career maturity in Jamaican high school students. Other significant influences revealed by this study were locus of control orientation and socioeconomic status. An internal locus of control and belonging to a higher socioeconomic group were both indicative of a higher level of career maturity in the three age groups studied. These are influences which seem to be consistent across cultures. Gardner (1981), Bigelow (1981), and Curry (1980) all found a positive relationship between internality and career maturity in an American population.

Socioeconomic status has also emerged as a determinant of career maturity in studies of American adolescents (Currie, 1973) as well as cross-cultural populations (Achebe, 1975; Huang, 1974; Moracco, 1976). Contrary to the findings in existing studies of non-American students, however, gender was not a factor in the development of career maturity in the Jamaican high school sample. Both Achebe (1975) and Huang (1974) found gender to be a significant influencer on the career maturity of the cross-cultural populations they studied. On the whole, girls scored slightly higher than boys on the CMI in the Jamaican sample. The findings in this Jamaican study are more in keeping with Crites' (1965) assertion that there are few differences in the development of career maturity in boys and girls.

Whereas gender was not a factor in the development of career maturity in Jamaican high school students in this study, this was not the case in the differentiation of locus of control orientation. Gender emerged as a significant predictor in Jamaican students' external/internal pattern of reinforcement in the two lower forms studied. Males and females at the fifth form levels, however, showed no difference on this dimension.

There was a shift from externality to internality in the locus of control of students in both cultures with some variations. Although girls in the Jamaican sample studied seemed to begin with more externality in the early years of high school, when they reached the

fifth form, they were more internal than the age equivalent American experimental sample. In the case of the boys, the pattern was somewhat different. Boys from all three socioeconomic groups in the three form levels compared exhibited a higher degree of internality than the boys in the American sample.

The differential growth in the pattern of locus of control orientation was uneven for males and females, with females making greater strides in the direction of internality between first and fifth form in the Jamaican sample in this study. One possible explanation of this phenomenon is that the socialization pattern in the home may encourage externality for girls and internality for boys (Louden, 1978). However, the socialization pattern in the academic high schools, which were predominantly single-sex schools in this study, seems to allow girls to develop an internal locus of control. In a preliminary study, Hamilton (1979) has suggested that girls achieve at significantly higher levels in girls' schools than in coeducational schools.

The patterns in the development of locus of control observed in the students in this investigation are rather unusual in the light of existing research on this concept in other non-American cultures. In all reviewed studies of, or conjectures about, locus of control orientation in Third World, West Indian, or Jamaican populations, participants have been described as, or expected to be, externally

controlled (Lefcourt, 1983; Louden, 1978; Sinanan, 1982). Indeed, Louden (1978) considered the socialization and child-rearing practices of West Indians in England to be the very antithesis of the conditions needed for the development of internal locus of control. This significant shift to an internal locus of control by the terminal year in high school found in this study is also contradictory to Richardson's (1982) indictment that the atmosphere in the Jamaican high school was not conducive to the development of this dimension.

Lefcourt (1983) has described Blacks, Spanish-Americans, Indians, and other minority groups in North American society as holding fatalistic, external control beliefs. However, an internal orientation has been observed in members of minority groups who value "hard work" over "good luck" (Coleman, 1966). In Axelson's (1985) opinion, migrant West Indians in the United States, whom he has characterized as similar to European groups in their patterns of achievement, seem to fit the pattern observed by Coleman.

In addition to gender and age-related development, socioeconomic group membership seemed to have significant effects on both career maturity and the external or internal reinforcement expectation in the Jamaican high school students in this study. Higher socioeconomic status was indicative of an internal locus and lower socioeconomic status of an external locus, confirming the relationship observed by Nowicki and Strickland (1973). Similar differences were found by

Achebe (1975) and Huang (1974) in cross-cultural populations and by Currie (1973) in American adolescents.

In the light of these findings, Jamaican students in the lowest socioeconomic group are also likely to be externally oriented and career immature. Therefore, they are most at risk and in need of career guidance, according to Crites' (1978b) expectations.

Richardson (1982) determined that Jamaican students in the lower socioeconomic group were more likely to make early career decisions, foregoing the luxury of the moratorium advocated by Erikson (1968) as conducive to greater maturity in decision making. Students who are in danger of making unrealistic career choices are also more likely to expect significant others or the system to pave the way for them. However, these students are also likely to be lacking in mentors, since they may be the first generation in their family to attend high school. While their parents are interested, hopeful, and willing to make sacrifices to advance their educational dreams (Hamilton, 1979), they lack the necessary expertise to guide them.

The magnitude of the failure rates in external examinations among Jamaican students would suggest that many students who could be categorized as both career mature and internally controlled are also among the failures. Such failures are more difficult to explain, given the combination of career maturity and internal locus of control which are expected to be hallmarks of achievers (Farmer, 1978; Gardner, 1981).

A possible explanation of the high failure rates could be inconsistency between measured attitudes and behaviors in Jamaican high school students. Although career attitudes may have reached the level of maturity considered necessary for realistic choice, parental pressures and identity issues could prevent the reconsideration of a career choice made prior to enrollment in high school. The prestige attached in Jamaica to a university degree and preparation for entry into a profession could mean a "loss of face" if one failed to follow through with earlier plans and to fulfill the family's or neighborhood's role expectations.

Another possible explanation of the high failure rates could be the changes fueled by massive migration of professionals from Jamaica in the wake of political and social changes of the 1970s described by Mandle (1982). In addition to this "brain drain," there has been a continuing disillusionment with teaching as a career in Jamaica. For many new teachers, the teaching profession has become a revolving door. Many former teachers have deserted the profession for business careers which have proved to be more lucrative.

Implications

In Jamaica, as in other developing countries, ignorance about the world of work, beyond the major common occupations, is a severe handicap to career choice (Arene & Durojavbe, cited in Drapela, 1979). Guidance services have been available in many high schools, but a

single counselor has been servicing 1300-1500 students. While the Jamaican school counselors have been resourceful and creative in meeting the very diverse needs of the student population, the materials for career guidance have been non-existent.

The twin issues of parental expectations and teacher flight from Jamaica's schools are cultural and political ones beyond the scope of this research study. However, the problems of lack of career guidance and appropriate materials can be easily addressed. The implementation of career exploration programs have proved beneficial in elevating career maturity and providing occupational information. Yates, Johnson, and Johnson (1979) found positive attitude changes in students toward the process of exploration of career choices and entering the world of work after participation in only five 1-hour sessions. Pemberton (cited in Drapela, 1979) reported that active legislative support of career guidance programs in Brazil resulted in more realistic career choices based on labor market needs.

Techniques to modify locus of control have been successfully used by teachers working with the lower socioeconomic groups. Gardner and Beatty (1981) found that these concepts could be incorporated into teacher response to students, leading to greater career maturity, acceptance of responsibility, and more positive work attitudes among students.

The need for effective cross-cultural understanding has been echoed at many levels: the political, economic, and more recently at the professional level. The examples of the Peace Corps and of international student exchange programs have made rich contributions to promoting world understanding. Counselor educators committed to developing culturally-skilled counselors are in a unique position to explore the possibilities of internships in countries such as Jamaica for graduate-level students who want to move beyond the limitations of a monocultural world view.

Recommendations for Further Study

On the basis of the findings of this study, the following recommendations for further study are made for consideration.

1. The career maturity and locus of control of students in Jamaica's rural, technical, and vocational high schools should also be studied.
2. The career maturity and locus of control of Jamaican students who have been exposed to career guidance programs in high school should be compared to those with no such exposure.
3. Comparisons should be made of the development of career maturity and locus of control development in females in single-sex and coeducational schools in Jamaica.
4. Research should also be undertaken with the Competence Scales of the Career Maturity Inventory, since the Attitude Scale has proven

to be an adequate measure for differentiating among different age groups in Jamaican society. Students' scores on self-appraisal, occupational information, goal selection, planning, and problem-solving--the areas measured by the Competence scale would furnish a more complete understanding of the career maturity of Jamaican high school students.

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APPENDIX A
LETTER TO PRINCIPALS REQUESTING PARTICIPATION
OF STUDENTS

2615 Baywood Drive
Titusville, Florida 32780

June 8, 1987

Principal
High School

Dear

I am a doctoral candidate at the University of Florida preparing to submit a research proposal on the career development process of students in a developing country. I am seeking your permission to include your high school in this study.

My interest in this project springs, not only from my years as a foreign language teacher in Jamaica, but also from an awareness of the growing demand for guidance and counseling services in the developing countries and the sparseness of research in this area.

The proposed study will explore gender- and age-related differences in career maturity of First, Third, and Fifth Form students. The instruments I plan to use are the Crites' Career Maturity Inventory and the Nowicki-Strickland Locus of Control Scale for Children. The administration of these research instruments will require about one hour. In addition, I am requesting access to students' most recent academic records.

The locus of control construct offers great promise for targeting remedial action with students. Locus of control expectancy, i.e., people's belief about the control they exert over different aspects of their lives, has been used to identify attitudes which are conducive to career and academic success. Strategies which have been useful in shifting students' locus of control (from external to internal) have also had a positive impact on increasing career maturity.

The study is expected to identify students who are most in need of career guidance and the type of career guidance needed based on their degree of career maturity. The results will be made available to participating schools.

I plan to conduct this study in September, 1987, and look forward to a mutually beneficial association. I would appreciate hearing from you as soon as possible.

Yours sincerely,

Yvette Boodhoo

APPENDIX B
DEMOGRAPHIC QUESTIONNAIRE

Please fill in your name and the answers to the following questions:

NAME _____ FORM _____

SEX: _____ BOY _____ GIRL AGE: _____ Years _____ Months

FATHER'S OCCUPATION: _____

MOTHER'S OCCUPATION: _____

BIOGRAPHICAL SKETCH

Yvette Ritson Boodhoo was born in Wakefield, Jamaica, and attended St. Andrew High School as a recipient of 1 of 28 scholarships offered nationwide.

On the basis of her performance in the Cambridge Advanced Level General Certificate Examinations, she was awarded the Anna Hollar Memorial Scholarship for study at the University College of the West Indies, a college of the University of London. She majored in French and received the B.A. (Hons.) degree from the University of London.

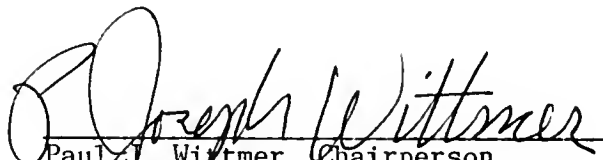
She studied in France and Germany and taught French, Latin, and German in Jamaican high schools.

In 1976, she migrated with her husband, Victor, and two children, Gary and Terry, to central Florida. She has lived in Titusville, Florida, since 1978.

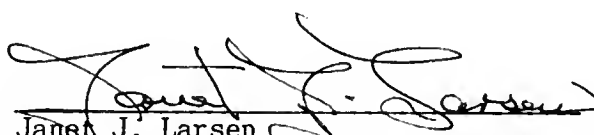
In 1980, she received the M.A. degree from the University of Central Florida, Orlando.

She has contributed to the development and presentation of a variety of personal and career development programs at Brevard Community College and has conducted training in the areas of career development and cross-cultural awareness for community college faculty.

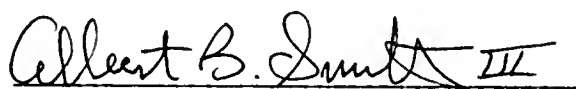
I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.


Paul J. Wittmer, Chairperson
Professor of Counselor Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

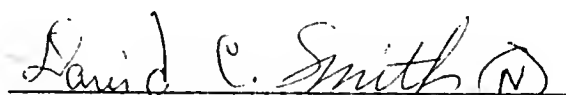

Janet J. Larsen
Professor of Counselor Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.


Albert B. Smith, III
Professor of Educational Leadership

This dissertation was submitted to the Graduate Faculty of the College of Education and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

August, 1988


Dean, College of Education

Dean, Graduate School

UNIVERSITY OF FLORIDA



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